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Address

THE ESSENTIALS OF SUCCESSFUL PUBLIC HEALTH ADMINISTRATION*

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At the present time nothing can be more appropriate than a discussion of certain modern views concerning public health administration and the auxiliary factors that go to make such administration a success. While the problem of public preventive medicine would, *a priori*, seem to be easily soluble through the employment of well-established principles, it is found by actual experience to be beset with difficulties, many of which would not exist were there a more intimate acquaintance, on the part of all concerned, with the requirements of the work.

PLEA FOR PROFESSIONAL CO-OPERATION

With an audience of this character it is perfectly warrantable to assume that success in public health work is not only desirable, but actually demanded, and to expect, therefore, from each individual such co-operation as lies within his power to give. Proceeding on this assumption, it is my purpose to indicate in the course of these remarks the manner in which I believe this demand may best be met.

It is an unfortunate fact that many physicians, as well as laymen, regard the problem of public preventive medicine as soluble through the inscription on the statute books of specific laws, and the appointment of boards whose duties it shall be to see that such statutory regulations be enforced. As a matter of fact, such a combination represents only the nucleus about which are assembled the various accessories that together constitute the machinery which, according to the perfection of its organization and the smoothness of its running, promises success or failure to the undertaking.

You have only to reflect for a moment on the objects and aims of public health organizations to realize the impossibility of progress when the hands of those responsible for administration are tied by inflexible laws on specific topics, and when the only assistance available for the correct conduct of the work is that officially supplied. You have only to consider the manifold ramifications of the problem to realize how impossible it would be for any community to secure and support a corps capable of collecting all the data essential to a full understanding of prevailing conditions. Yet the collection of such data is of fundamental importance to the accurate performance of the duties for which the authorities are held responsible. In what manner, then, is the deficiency met? It is met by pressing into service those

of the community who, by virtue of their calling, possess the knowledge needed by the authorities, i. e., by requesting the medical profession to co-operate to the extent of prompt notification of all matters bearing on the public health that come to their notice in the course of the day's work.

It may never have occurred to you that, practitioners of medicine, you are in affiliation with department of health. It is true your names do not appear on the list of municipal employes, and there are no monetary compensations reaching you at fixed periods as agreeable reminders, but you are, nevertheless, a part—a most important part—of that branch of the administration, and have been so since the date of your registration as practitioners in this commonwealth. In evidence thereof you have supplied to the authorities information of vital importance to the detection and isolation of dangerous diseases, you have given to them substantial support in efforts to enforce regulations aiming to eliminate such diseases, and by your example and precept you have helped in bringing the public to understand and appreciate that the concerted action of yourselves and your colleagues in authority is always for the best interests of the many, even though at times it may seem to bear hard on the individual.

I anticipate no dissenting voice when I say that the most important ally of the public health authorities is the medical profession, nor do I fear contradiction when I maintain that allegiance is of the highest value only when willingly given for intelligent reasons.

NEED OF DISCRETIONARY POWER

Such being the case, the importance of a clear mutual understanding of the objects and desires of the several arms of this organization becomes at once apparent.

The arbitrary enforcement of cut-and-dried regulations, many of which are obsolete and unsuited to modern demands, by individuals not trained for the service, unacquainted with the advances in preventive medicine, devoid of sympathetic interest in the evolution of medical ideals, and consequently lacking in public and professional confidence, has led too often to an estrangement between the body in authority and those from whom it should receive support, with a result, needless to say, that is fatal to everything in the way of progressive administration.

When we contemplate the rapid advances in knowledge on the manifold phases of disease we are at once impressed with the fact that, excepting such statutory regulations as are of the most general and basic nature, none that can be enacted are likely to prove of permanent service. Some must be revised to meet the modern demands and new ones formulated adaptable to unexpected contingencies. The framing of such rules and regulations as shall be based on common sense, harmonious with scientific requirements and in accord with established sanitary precepts, falls, as a rule, on those

* Delivered before the Philadelphia County Medical Society

responsible for their administration, but they are rich men who will undertake this task without the support of those who see intimately and constantly many phases of the subject that they, by reason of circumstances, can view only from a distance

A limited practical experience with public health matters has convinced me that, where a close and intelligent co-operation between the medical profession and the body in authority exists, the interests of the community are best served by giving to those in authority absolute power and by holding them rigidly accountable for the judicious exercise of such power. This may seem a startling proposition, but I can assure you that it is not made without due reflection, nor without discouraging experiences with specific, inelastic statutes unsuitable to newer conditions, but unchangeable without special legislative action.

The regulations formulated by the body in authority should have the force of laws, and it should be possible promptly to amend, modify or repeal them as conditions dictate.

Powers of that magnitude are of advantage in several ways, viz., the enormous responsibilities thus thrust on the authorities insure the utmost care in the framing of regulations, the abuse of such power reacts directly on those misusing it, and its possession by competent individuals permits of the framing of new and the revision or repeal of old regulations as the occasion warrants without the doubt and delay incidental to legislative deliberation.

This idea is not altogether new. In many particulars the original laws creating boards of health and quarantine boards gave to them general powers that are almost plenary, and I am not sure but that in a court of final appeal that power would be found to extend much further than would appear from the casual reading of those laws. However, as there may be some doubt as to the scope of the power conferred by the original laws, as subsequent laws only harmonized with the knowledge existing at the time of their enactment, and as the modern problem of public health, like all other medical problems of the day, assumes more or less of a new aspect with each advance in our acquaintance with disease, it seems wise to make provisions whereby laws may be promptly repealed, amended or otherwise modified to meet the needs of the ever changing subject comprehended by them.

CONDITIONS IN PHILADELPHIA

When those at present responsible for the administration of public health matters in this city took office they were fully sensible of the responsibilities that were assumed, but were correspondingly ignorant of their powers to carry into effect certain propositions that were regarded both by themselves and their medical advisers as of fundamental importance to the successful and comprehensive performance of their duties.

An examination of the statute books revealed the existence of many excellent laws, some of them as good as could have been formulated at the time, but practically all of such a nature as to limit the authorities to certain specific lines of action. They contain no authorization for the exercise of personal judgment in the treatment of unusual individual cases and no revision or modification is possible without legislative approval.

A brief experience with such circumscribed authority soon demonstrated the impossibility of carrying into effect many modern views concerning the scope of the work, and many trials at modifying the existing laws

made evident the unlikelihood of satisfactory results. It was, therefore, decided to petition the state legislature to confer on the health authorities of cities of the first class in this commonwealth power to make regulations especially referable to the management of contagious diseases, regardless of existing laws, such regulations, when formulated and made public, to become laws susceptible of modification, amendment or repeal, as experience might dictate.

This request was granted, and as a result there are shortly to be put in operation a set of regulations that it is hoped may meet with your hearty support, since in framing them the utmost care has been exercised to safeguard fully the public health without working more than the minimum of hardship and inconvenience on the individual. While these regulations are issued as laws, it is true they are laws that may be modified or repealed as circumstances demand, and this, too, without the doubt and delay incidental to legislative consent. Therein lies the fundamental beauty of the act of 1905, under which we are at present operating. The new regulations differ in a number of particulars from those formerly in force, but this is made necessary by the demands of an ever-changing problem, of a progressive medicine and of an enlightened public.

PREVENTIVE MEDICINE IN THE PAST

A comparatively short time ago the problem of preventive medicine, in so far as it concerned the health of the public, comprehended the suppression of only a small group of diseases having conspicuously epidemic tendencies. Little or nothing was known of their causation, scarcely more of the manner in which they were disseminated, and the means for their prevention, barring smallpox, were in the main empirical. The mildly contagious diseases, ever present in all populous centers, were not taken seriously, their existence was viewed as a matter of course, and as they were not conspicuously fatal they were accorded no official recognition. Tuberculosis, the most frequent cause of suffering and death, was considered an heirloom, dangerous only to the afflicted individual, and for him hopeless, unless amenable to cod liver oil and climatic treatment. The so-called miasmatic diseases, especially malarial and yellow fevers, were not supposed to bear any direct relation to other cases of the same diseases, and the channel through which such relation is established was scarcely more than suspected.

The important advance of recent years in our knowledge of the natural history of disease, especially as regards causation, modes of dissemination and methods of prevention, constitute one factor in forcing a different attitude toward transmissible diseases in general, while the demand of an enlightened public for a progressive and comprehensive consideration of the subject may be regarded as the other.

MODERN PUBLIC HEALTH ORGANIZATION

As the successful solution of this problem depends fundamentally on a clear conception of its scope, not only by those officially responsible for its solution, but by those to whom they look for aid, it is appropriate at this time to indicate, possibly in some detail, the objects, aims and accessories of a modern public health organization.

In a word, the primary object of such organizations is to safeguard the public health by direct attention to preventable diseases. According to the tenets of modern medicine and the dictates of common sense, any disease that is transmissible from person to person should be, to

more or less extent, preventable, particularly if its exciting factor and the manner in which it is disseminated be known. If this dictum be admitted, it then becomes the duty of all interested in the prevention of disease to take into consideration not only the comparatively small group of conspicuously epidemic diseases, as formerly, but to enlarge the list to include all types of sickness that are known to be transferable from person to person.

Such is, in fact, the modern tendency. But in the practical application of means to the end the work may be fairly regarded as yet in the experimental stage. At the present time it is customary to consider diseases according to the degree of their transmissibility, those of a dangerous and highly contagious nature being surrounded by safeguards that are not thought necessary to the milder forms, while others are surrounded by no apparent safeguards at all, unless the educational methods practiced in connection with them be given their due value.

NOTIFICATION NECESSARY

That such preventive measures as are appropriate to the exigencies of the particular type of disease encountered may be taken, it is necessary that all existing cases of transmissible disease be regularly and promptly recorded at a central bureau. Such notification falls to the practitioners of medicine of the community.

Here is encountered the first obstacle to correct administration, though I am glad to say that in this community it has never reached serious proportions. Nevertheless, questions often arise that it is of importance to our mutual understanding to discuss here. The commonest of these questions relates to the desirability of recording *all* types of transmissible disease. The principal reasons for recording all communicable disease may be briefly summarized as follows: 1, that those in authority shall know definitely and at all times the exact disease situation in the community, otherwise the functions for which they are responsible can not be satisfactorily performed, 2, that local predisposing or exciting causes, possibly accountable for the origin and perpetuation of disease to a greater extent in one part of the community than in another, may be detected and if possible, eliminated, 3, that immediate measures may be applied to those diseases admittedly demanding the utmost promptitude in official action, 4, that a correct and complete record of location and environment may be kept of those diseases less urgently requiring official supervision, 5, that appropriate educational measures may be employed in connection with the less dangerously communicable diseases, and, 6, that all channels through which disease may be carried from the infected premises may, if possible, be cut off.

The manifold uses made of such data as are here requested would be impracticable for a private practitioner, even were it his duty to utilize them in a comprehensive way. Successful practice of public preventive medicine is impossible without a prompt and correct registration of all types of transmissible disease, and there is no feature of the work more urgently demanding the conscientious co-operation of the private practitioner.

An occasional practitioner has regarded it as a hardship to be asked to report such cases, especially since he receives no compensation for it. Surely such complaint is made without reflection. For sake of argument let us assume that the general practitioner encounters on an average one case of reportable disease a week (a high estimate I take it). Is it a very great hardship for him to fill out the spaces on a post card, supplied to him

without cost, and mail it at a convenient post box? The whole operation should take but a few minutes at most.

As to the matter of compensation, is he not already paid, in this city at least? Is it forgotten that antitoxin for the treatment of diphtheria among the poor is gladly supplied him without cost whenever he demands it?

Is it forgotten that all of his cases of suspicious sore throat may be examined bacteriologically free of expense?

Is it forgotten that vaccine virus for use among those unable to pay for it is distributed gratuitously, and the vaccinations are performed, free of expense, by expert in the work whenever the request is made?

Is it forgotten that he is aided, again without expense, in the scientific study of supposed cases of typhoid fever?

Is it forgotten that the services of trained diagnosticians are to be had on demand in connection with all cases of supposedly contagious nature, and thus, too, at no cost to either physician or patient?

Is it forgotten that the disinfectors of the health department are at his bid and call for all work properly coming within their province?

In short, is it realized that the entire machinery of the Department of Health stands ready to do for the public welfare anything within the scope of their duties that may be requested by a practitioner?

As I see it, there is compensation, and compensation in abundance, for the limited service that is required.

The importance of prompt, concerted action in the matter of reporting disease has been brought to our attention in a very forcible manner within the past three weeks. The incident is of such instructive nature that I venture to detail it. On October 20 the Bureau of Health was informed that there were several cases of typhoid fever in one of the students' boarding houses in the city. Simultaneously with that report came others from physicians practicing in the vicinity of the boarding house. The total number of cases occurring within a few days of one another, and in most instances in the surrounding neighborhood, is thirty-nine, all of which, when the necessary data were obtained, were found to receive milk from the same source. Two brothers supplying the milk were taken, practically from the delivery wagon, to hospitals, both suffering from typhoid fever. Further inquiry developed the fact that both brothers, up to the time of admission to hospitals, had been filling their milk bottles from the original cans by sucking the milk, with the mouth, through a rubber tube, and thus syphoning it from the cans into the bottles in which it was delivered to the customers. It seems to me that this is information of some value to the public. But when I tell you that twenty-four physicians and three hospitals were concerned in those thirty-nine cases of disease, and that none of the physicians reported over two cases, you may readily perceive how unlikely it would have been for us to have discovered the cause of the trouble had there been no notification, or only notification by a small number of the practitioners seeing the cases. There would have been little or nothing to attract attention, for the existence of two or three cases of typhoid fever in the practice of a single physician, in a city in which typhoid fever is disgracefully prevalent, is not apt to be unusual. It is not reports from one or a few men that are wanted, it is reports from all, and the aggregate of reports constitutes the datum that is of real importance to the work.

Inspection—Complaints frequently reach the health authorities to the effect that their representatives are

efficient, that they call at the houses from which cases are reported and ask many questions. The authorities readily assume the responsibility for questions asked, and they take great pains to instruct their representatives to pay due regard to the rights of the family physician when asking the questions. All questions authoritatively asked by an inspector who is detailed to secure data on a reported case have been duly considered and formulated by the responsible heads of the department. They bear on what may be called the sanitary history of the case, and the answers to them are of vital importance to the discovery of sources of infection common to groups of cases. They are not left to the inspector, but are on a printed blank, and embrace so many phases of the subject that were the physician in attendance asked to formulate them or to reply to them he might with justice complain that a hardship was put on him.

The Placard—In the course of the customary official management of contagious diseases a bone of contention that has ever stood conspicuously to the fore is the use of the placard. It is not my intention to open the debate on this subject, but rather to state a reason, perhaps the most important reason, why the use of the placard is continued in the new as in the old regulations. This is best done by the recital of a personal experience. Some two years ago a medical friend in whom I have the fullest professional confidence, and for whom I have a warm personal regard, called at the bureau in something of a state of mental perturbation. He told me that two of his children were down with scarlet fever, that from the onset of the disease they had been perfectly isolated in the top story of the house, that a trained nurse had been secured to attend them, that there was absolutely no communication between these cases and the remainder of his family, and that he would be personally responsible for the continued quarantine of the cases until they were well if the placarding of his house could only be omitted. As he enjoys a large and lucrative office practice, as I had no doubt of his sincerity, and as I was new at the business, I consented to omit the placard. Within two days I received messages from two of his patients that gave me, I can assure you, a most uncomfortable few minutes. The complainants stated that they would under no circumstances have visited his office had they known of the existence of contagious disease in the house, and that as citizens they demanded of those in authority due notice of where dangerous diseases exist. It is evident that if the placard does nothing else it at least satisfies this reasonable request.

Vaccination—For the past few years the health authorities of the United States have been greatly exercised over the occurrence of smallpox. The disease has prevailed in varying degree in almost every state of the country. Could there be a less flattering commentary on our vigilance and intelligence? With a method at hand for the absolute prevention of that malady, the responsibility for its existence falls directly on our own shoulders.

You may perhaps be astonished to learn that since the advent of smallpox in Philadelphia, in about 1898, there have been vaccinated at the public expense approximately 600,000 persons. Many of these had never been vaccinated at all, while many of the balance had submitted to the operation at so remote a date as to make doubtful the protective value of the vaccination. This figure includes none of the persons vaccinated by physicians in their private practice.

In addition there has been maintained, also at the

city's expense, a hospital for the reception of a disease that should never exist and would not exist were we to perform unrelentingly our duties to the public. Two items of emergency vaccination and special hospital maintenance constitute a financial obligation that an enlightened community should be forced to assume. Vaccination and re-vaccination be rigidly enforced; a routine measure, I see no reason for the maintenance of expensive hospitals and the support of experts to care for smallpox patients. The few cases that might be reported from beyond our boundaries would cause alarm, and they could easily be managed in simple temporary, but efficient, quarters.

While on this subject it is important to invite your attention again to an instructive experience gained in the course of official work. The routine medical examination of public school children now practiced by medical officers of the bureau of health has revealed a practice that, to put it mildly, can scarcely be deemed commendable. Hundreds of children, having no record of whatever of vaccination, but still holding certificates of successful vaccination, have been discovered in schools. The great majority of the certificates had been signed and issued by the physician at the time the operation was done and without subsequent verification. The exclusion of the child from school as a protective measure is, under the circumstances, imperative, with the result that it loses valuable time, while the physician at fault loses the confidence of its parents. The remedy for this is too obvious to require comment.

Diphtheria Antitoxin—Scarcely less important than the value of vaccination in preventing smallpox is the prophylactic use of diphtheria antitoxin in combatting the dissemination of diphtheria. The protection afforded, though temporary, is nevertheless absolute. In consequence this agent has become a permanent adjunct to the armamentarium of those concerned in public preventive medicine. The statistics of this community do not warrant the opinion that antitoxin is as widely used by physicians for the prevention or even the treatment of diphtheria as its value demands.

Hundreds of cases of typical diphtheria in the fourth, fifth and sixth days of the disease arrive at the Municipal Hospital annually without ever having had a single dose of antitoxin. Many of these cases had been seen by physicians, and yet the Department of Health is making every effort to encourage the more extended use of this agent. It is supplied without cost for use among the poor, and the medical officers of the bureau may be called on to administer the remedy free of charge whenever a physician so desires it. Did we take the pains to inform the public at every appropriate opportunity of the spread of diphtheria throughout a household or from one child to another can certainly be prevented by the injection of a small dose of antitoxin, its use would be more general, fatalities would be decreased in number and the incidence of the disease enormously lessened.

Further Preventive Measures—The opinion is gaining among those who reflect on the subject that certain highly-contagious diseases may be and often are carried from one house to another by physicians, nurses, clergymen, undertakers and others who may have been in contact with them during the performance of their respective duties.

Such an accident is as little desired by the profession as it is by the laity and by those responsible officers for the public health, and as its prevention necessitates the taking of simple, common-sense precautions, it comes the duty of those in authority to encourage

every way all efforts to safeguard the public against such accidents by appropriate recommendations. The regulations authorized by the legislature of 1905 bear on this point—not in the way of rigid requirements, but as suggestions that it is believed will meet with the approval of all who are sincere in their efforts to co-operate in this work.

Hospitals—Of all the auxiliaries essential to the safe conduct of this work, probably none is of greater importance than properly equipped hospitals. Such hospitals should contemplate not only the reception of cases that are unable to pay for medical care, but of pay cases as well, and in order to insure the use of the hospital by the latter there should be regulations permitting the medical care of such patients by their own private physician if it be so desired.

Such hospitals, for all diseases except smallpox, should be conveniently located, should be modern in equipment, should be attractive to the eye and in no sense suggestive of a pesthouse, and should be manned by men known to be experts in the management of the diseases that they are designed to receive. Every effort should be made to transfer patients suffering from contagious diseases to such hospitals.

Under the best of circumstances, even in hospitals, the complete isolation of certain diseases of this class is attended with difficulty, how much greater then does this become when they are at their homes often under the supervision, during the absence of the physician, of sympathetic though perfectly incompetent friends or relatives. Under ordinary conditions I believe it safe to assume that the progressive incidence of contagious diseases in a community is in direct proportion to the number of foci, i. e. of infected private premises, in that community. The lessening in the number of such foci by transference of cases to hospital is largely in the hands of the family physician. His advice will go far toward the accomplishment of the desired end, and in most cases such advice, I am sure, would be given had we appropriate accommodations for the patients.

In the majority of instances I believe a busy man in general practice would gladly be relieved of the responsibilities and annoyances of patients sick of dangerous communicable diseases were there suitable hospitals for their accommodation. The health authorities want your co-operation in efforts to secure for Philadelphia hospitals for the care of contagious diseases, not makeshifts or pesthouses, but modern institutions commensurate with the dignity of our city and of the utmost importance to the proper control of contagious diseases.

Disinfection—In still another direction can the private practitioner be of substantial aid in the campaign against disease. There is no longer any doubt of the value of disinfection, cleanliness, sunlight and fresh air in destroying and eliminating contagion. Opinion on this subject is securely established on experimental evidence, statistical proof and wide experience. The routine disinfection and cleansing of premises occupied by the highly contagious diseases is approved and demanded by all, but the case is somewhat different with the less dangerous, though time-consuming, maladies of transmissible nature.

Much could be done toward lessening the incidence of the latter were similar measures taken in connection with them. Many of the laity do not comprehend the desirability of such action. A word from the medical advisor will serve to impress them with the need for it. In connection with the transmissible diseases that run a protracted course (I have tuberculosis in mind) fre-

quent disinfection and cleansing by simple but efficient and appropriate methods will go far to lessen dissemination. As a general safeguard I believe that every house or apartment that has been vacated by a family, regardless of the question of disease in that family, should be disinfected before being let to others. Thus the Bureau of Health stands ready to do without cost to owner or agent and looks to you for co-operation in this suggestion.

The Creation of Public Sentiment—Finally, it may safely be said that unless the public comprehends clearly the importance of the end toward which we are all striving, and appreciates the relation of all measures to that end, but little progress can be made. The campaign for the health of the people is essentially a campaign of education. Enlighten the people on all phases of the subject and at every opportunity, and the work will progress smoothly. Keep them in ignorance, surround the subject with mysteries that cannot be comprehended by a plain man, and no laws that are enacted or powers that are conferred will suffice to accomplish the desired result.

Original Articles

NATIONAL QUARANTINE A REASONABLE FUNCTION OF THE GOVERNMENT

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The preservation of the health of the people of the United States is a function, within the scope of the duty of the national government. It bears a close relationship to the efforts put forward by the national government toward preventing the spread of epidemic diseases and finds its counterpart in the methods adopted to prevent the destruction of forest trees in the New England states and the destruction of the fruit industry on the Pacific slope.

The care of the health of its citizens, the keeping out of bubonic plague, Asiatic cholera, and yellow fever are certainly as important as carrying out the measures above mentioned, in which the government has undertaken control.

The suggestions contained in this paper, which will be mostly in reference to yellow fever, will apply as well to bubonic plague in California, to Asiatic cholera in New York, or the isthmus of Panama.

Every other health consideration along our Mexican gulf coast line dwindles into insignificance in comparison with yellow fever and the quarantines incident to the introduction of yellow fever at some of our southern dependencies. Previous to 1900 we thought these yellow-fever outbreaks dependent on fomites (whatever that may mean), but in 1905, in Louisiana, Mississippi and Florida, we went into the fight not blindly, but knowing our enemy and knowing that the sole propagator of the disease was the *Stegomyia fasciata* mosquito. It is needless here to go into details regarding what the world already knows, that we destroyed this insect in New Orleans at an expense to its citizens of one-quarter of a million dollars, made up by private subscriptions, to say nothing of the hundreds of millions lost in trade and commerce by the one hundred different varieties of quarantine, which we were called on to meet. Surely it is not reasonable or fair to suppose that this burden of

keeping out pestilential diseases from the entire United States rests on the citizens of one municipality or state, who are already taxed to the limit in maintaining levees to keep from being drowned by the floods of the great watershed of the West

Uniformity of detention from infected parts would be one of the results we might expect from national control. Heretofore, each state has been a law unto itself, some adopting five and others six days' detention from points of departure, as seemed most feasible to the various boards of health. With a national law all this could be regulated so that no city, in its greed for trade, could let down the bars so as to let in infection. Because of the close railroad connection between the gulf cities, passengers can land at one port, and within five hours be in the next gulf city, thus nullifying the action of the board which required six days' detention.

Persons leaving Havana on fast steamer can go to New York and return to New Orleans within less than the six days' detention necessary at the New Orleans quarantine station, hence, New York and all other northern ports should really adopt this six-day detention or infection from yellow fever would become liable through the laxness of their quarantine.

If the national government were responsible for the inspectors in all the foreign ports, and if these were properly selected from the Army, Navy, Marine-Hospital Service or any national quarantine service and ordered to report the first outbreak of fever in Mexican and South American countries on pain of dismissal if their reports were not correct, it would keep the health guardians in constant touch with all ports from which infection comes.

A part of the duty of these inspectors might be to educate these countries in the destruction of the infected *Stegomyia* mosquito, as on its complete destruction depends the annihilation of the yellow-fever plague, as a case of yellow fever would be incapable of developing the infection in others, without the mosquito to serve as the intermediary host.

It is not beyond the range of possibilities to exterminate the disease by the destruction of all the *Stegomyia* and their breeding places, or by the screening for the first three days of all yellow-fever patients in all countries in which the disease is endemic. This would require the concerted action of all governments in South American countries, including Mexico and Brazil.

Compacts between state boards have not been kept as agreed to. To acknowledge the existence of yellow fever in a community is practically to shut oneself out from the outside world, and this is a hard thing to expect of the average community. Quarantine has been so destructive to trade that commercialism and politics have dominated some boards and forced them to take chances with the suppression of the first cases of yellow fever in the vain hope that it would not spread on account of the lateness of the season or the special efforts made to destroy the first infected mosquitoes.

Any city that has experienced the rigors of shotgun quarantine will resist the announcement of yellow fever until there is indisputable evidence of its existence. The first few days of an attack of yellow fever and one of malaria run such parallel courses that all the acumen of the best yellow-fever experts is at times put to the test in differential diagnosis of the severe forms of congestive or estivo-autumnal malaria and yellow fever. Hence, boards of health, in trying to deal honestly with the outside world, are often excusable for delay in coming to a conclusion.

GOVERNMENT INSPECTORS AND PHYSICIANS SHOULD BE REINFORCED BY LOCAL MEN

It would be nearly impossible to get the best co-operation of the medical men of any community (without which no law would be a success) unless some of the men should be selected from the various communities and accustomed to the diagnosis and treatment of the diseases with which they had to deal. The position of inspector or diagnostician of any health organization is not a happy one.

To declare that there exists in a community a contagious disease, which means loss in trade and all the inconvenience of quarantine, and to stand firm by the diagnosis, to keep track of recurring cases, and to keep a municipality locked up when all its inclinations are to be free, requires the strongest kind of physical and moral courage.

During the epidemic of bubonic plague in San Francisco the lot of the Marine-Hospital Service men was not a happy one. Between locating cases and dodging bricks they led rather strenuous lives.

The uniform of the government, under such circumstances, is required to enable the health guardian to command the proper respect and protection. Men in this service should be entirely divorced from practice; they should be sanitarians and not practitioners.

How few of the ordinary political physicians who get appointments are really trained sanitarians? In many cases these men are selected more from the number of votes they can poll at the next election, rather than from any sanitary acquirements they may possess. Sanitary experts should always be divorced from national and local political and commercial influences.

There is no doubt that the United States uniform commands attention and respect, which is not given to the state official.

People stand in awe when the United States Government is behind a movement. In the recent outbreak in New Orleans, citizens permitted representative inspectors of the government to visit each bedroom in their premises in search of fever, whereas, no such freedom of investigation would have been tolerated for a moment from the state officials without the government uniform. While under ordinary circumstances we do not advocate the invasion of a man's premises, this becomes absolutely necessary in getting correct data in a cosmopolitan population, where to deny the existence of disease is no uncommon rule.

While this is an apparent encroachment on personal liberty and the accepted theory that "one's house is his castle," such stringent investigation is absolutely necessary, in order to be thorough in the suppression of epidemic diseases in cosmopolitan cities. As stated before, the greatest obligation a government owes to its subjects is the preservation of the health of its people.

Our ports fronting on the Gulf of Mexico and on the Atlantic and Pacific Oceans should not be expected to bear the entire burden of the protection of the interior states from Asiatic cholera, bubonic plague and yellow fever. New Orleans should not be called on to contribute one quarter million from private citizens, as was the case in 1905, but all the interior states should help to keep out pestilential disease just as if the entire country were invaded by a foreign foe.

This is really the only way to make the burden of quarantine regulation bear equally on all. If all the states keep up separate quarantine stations, medical offi

cers and paraphernalia, which costs an average of from \$75 to \$100 per vessel quarantine charges for every ship that enters our port at New Orleans it makes the expense a hundred times greater than if the government or one central head should have charge of the entire regulation of quarantine matters

To illustrate, Port Lamou has had a medical inspector from the Marine-Hospital Service, one from Mobile and one from New Orleans, all watching for suspicious cases of yellow fever. If all this effort had been concentrated under a national quarantine service, removed from all political affiliations, there would have been a great saving in salaries and men.

The destruction of all the *Stegomyia* and *Anopheles* mosquitoes in the United States would mean the abolition of yellow fever and malaria. This contract is certainly large enough to be a government job and should be under its health department, and while we may never live to see this accomplished, a great deal can be done toward this end by draining the marshes and lowlands, thus rendering them suitable for cultivation. At present they are only the breeding places of these disease-carrying insects.

The building of the Panama Canal does not outweigh in importance the destruction of these two varieties of mosquitoes, for, while periodical outbreaks of yellow fever invade the country only in our southern states the *Anopheles* mosquito is getting in his malarial work over nearly the entire area of the United States, and nearly all the time, and malarial fever kills its thousands where yellow fever kills one.

The destruction of *Anopheles* or malarial mosquito is certainly, therefore, a national subject. The *Stegomyia fasciata* variety could be exterminated by oiling and screening cisterns and receptacles holding water and by putting open gutters in cities underground. The swamp mosquito (or *Anopheles*) could be eradicated by draining or filling in our marshes.

It takes a malarial or yellow fever patient and a *Stegomyia* or *Anopheles* mosquito to propagate or to spread either of these diseases.

NON-POLITICAL CONTROL

In nearly all the states' governments throughout the Union, regardless of which party is in control, there has grown up an office-holding syndicate which at each approaching election farms out or promises political jobs to medical health officers who control the greatest number of votes regardless of any qualification or experience these men may have in dealing with health and quarantine matters, hence, in changes recur with each election period, and health officers are deposed just about the time they are becoming efficient. I do not pretend to claim that a great many worthy and honorable medical men have not been chosen in the past to manage our health affairs, yet the reasonableness of the argument of divorcing all such appointments from a political spoil system is too apparent to need argument at my hands. Health officers should be protected by civil service rules so long as they are efficient and competent to do the work in hand.

As to whether the national quarantine should be under the supervision of the Marine-Hospital Service or under the control of the Navy or Army medical service or under a cabinet health officer, we leave others to argue but that maritime quarantine should be in the hands of the national government we are thoroughly convinced.

ULCEROMEMBRANOUS ANGINA (VINCENT'S ANGINA) AND STOMATITIS *

RUTH TUNNICLIFF, M D

AND

RUTH TUNNICLIFF, M D

CHICAGO

The disease to which attention is here directed has been described under several names, "ulcerative angina and stomatitis," "ulceromembranous angina and stomatitis," "pharyngitis ulcerosa," "angina diphtheroides," "angina exsudativa ulcerosa," "Vincent's angina," "angina chancriforme," "pseudomembranous angina," "spirochätenbacillen angina," etc. The name selected for the title of this paper is preferred as designating the principal characteristics of the process, i. e., ulceration and formation of a pseudomembrane. This is not a wholly satisfactory name, as frequently there is no ulceration, a pseudomembrane only being formed, as was observed by us in several cases. Vincent's name is not properly used to designate the angina, since it had been described¹ previous to his studies by French and Russian clinicians (Barthez and Sanné, Simanovsky, Nevejin, Moure and Mendel). All of the cases described are separated sharply by certain clinical and bacteriologic characteristics. On the affected mucous membrane there appear pseudomembranous formations and, as a rule ulcerations. In the exudate are found fusiform bacilli usually in association with long spirilla.

ETIOLOGY

Age—The majority of cases reported have been in young adults between 18 and 25 years of age. Athanasu's cases were in children between the ages of 26 months and 13 years. The patients we observed were children.

Sex—Males are said to be more often affected than females, according to most observers. This is probably due to the fact that many of the patients have been soldiers and medical students. The majority of our cases were in girls.

Predisposing Causes—The use of tobacco, trauma of the mucous membrane, as after tonsillotomy, eruption of a wisdom tooth, defective teeth or those covered with tartar, alveolar abscesses, gums of scorbutics, syphilis and mercurial stomatitis are said to predispose to this disease. It is said to follow the acute infectious diseases. Two of the cases studied by us followed scarlet fever, one followed measles and one whooping cough. Twice the condition was present at the onset of scarlet fever. The teeth were covered with tartar in the majority of our cases. Chronic enlargement of the tonsils and adenoids were present once. A previous history of alveolar abscess was obtained in one patient.

Bacteriology—According to Tarassiewicz, as quoted by Mayer, the first observer to note the association of the fusiform bacilli and spirilla with a disease process was Rauchaufus. In 1893 he presented cases of ulceromembranous angina in which he demonstrated pointed bacilli and spirilla and his photographs appear to show them to have been identical with those described by subsequent writers. Plaut, in 1894, described the organisms

* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session July, 1905.

¹ From the Memorial Institute for Infectious Diseases Chicago. References to authors have been omitted since a complete list of the publications can be found in the following recent articles: H. Beltzke, *Centralblatt für Bakteriologie*, 1904, vol. xxxi, p. 1; Weaver and Tunniff, *Journal of Infectious Diseases*, 1905, vol. ii, p. 446; *Berkeley Medical News*, 1905, vol. lxxvi, p. 976.

in five cases of ulcerous angina. Vincent, in 1896, described the fusiform bacilli and large spirilla in cases of hospital gangrene, and stated that the same organisms were found in certain anginas of an ulcerative type. Bernheim, in 1897, reported 30 cases of stomatitis and angina, in all of which he had found fusiform bacilli and spirilla. He appears to have been the first to point out the identity of certain cases of stomatitis and angina from the common etiology. Vincent, in 1898, reported a further series of 11 cases of ulceromembranous angina in which the organisms were present. These early reports have been followed by a large number of corroborating observations which testify to the occurrence in preponderating numbers of fusiform bacilli and spirilla in certain cases of stomatitis and angina. A large number of these observations have been recorded in French literature many in German and American, and a few in English. They indicate the wide distribution of the organisms in question. The infrequency with which the disease has been recognized has probably been due to failure to make direct examinations of the exudate from pseudomembranous lesions of the mouth and throat. Because diphtheria bacilli are not detected with any certainty by such examinations, the custom of depending on cultures quite exclusively has become almost universal, and as the fusiform bacilli and spirilla do not grow to any extent on the medium usually employed for the detection of diphtheria bacilli they have been largely overlooked.

In ulceromembranous anginas, the two bacteria under consideration have been observed in association with diphtheria bacilli by Abel, Baron, Bernheim, Vincent, Niclot and Marotte, Auché, Simonin, de Stoecklin, Galois and Courcoux and Oberwinter. Abundant fusiform bacilli but no spirilla were found together with diphtheria bacilli in one case by Beitzke and in 6 cases by Oberwinter. The latter author has observed 3 cases of diphtheria in which smears showed almost only fusiform bacilli and spirilla. That the organisms occur in syphilitic lesions of the mouth and tonsil is evidenced by the observations of Baron, Vincent, Freyche, Graupner, Hallopeau and Apert, Salomon and Wolff.

Abel was successful in demonstrating both fusiform bacilli and spirilla in healthy mouths, especially between the gums and teeth. Gross found bacilli and spirilla in small numbers on the normal tonsils in 11 out of 13 persons. It is generally stated that the spirilla described in these cases are the *Spirochaeta denticola* of Miller.

In most of the reported cases, the bacilli and spirilla have been recognized in smear preparations made direct from the seat of the disease, and in stained microscopic sections of tissues. Usually efforts to cultivate the organisms have resulted in failure. A number of investigators have grown the bacilli in mixed culture. Some also obtained a simultaneous growth of the spirilla.

The present description is based on the study of the organisms from the following sources. Two cases of ulceromembranous stomatitis, 4 cases of ulceromembranous angina, 1 case of pseudomembranous angina, 2 cases of combined angina and stomatitis, 1 case of noma of the cheek, 1 case of diphtheria, saliva and tartar from 18 healthy mouths.

Three of these cases, one of angina and one of stomatitis, and the one of diphtheria occurred in the wards for contagious diseases of the Cook County Hospital in the service of Dr. William L. Baum. Seven of the cases were observed in the Hospital of the Memorial Institute for

Infectious Diseases in the service of Dr. Frank Billings and Dr. Alexander F. Stevenson. To these gentlemen we wish to express our thanks for the opportunity of studying and reporting the cases. Two cases were observed in private practice.

In smear preparations made from the seat of disease, bacilli and spirilla were found which corresponded to those described by previous authors.

The bacilli are long, slender rods with pointed ends, somewhat larger in the middle. Sometimes the ends are rounded and the rod may be rather thick. They are sometimes slightly bent, and occasionally take the form of the letter S. The length is usually from 6 to 12 microns, but sometimes filiform elements of considerable length are encountered. The bacilli are usually scattered uniformly throughout the preparations and often occur as pairs end-to-end, sometimes forming more or less obtuse angles. At times they are seen in irregular clumps, or arranged radially about a common central point, or in rows somewhat similar to diphtheria bacilli. They stain fairly well with Loeffler's solution of methylene blue and anilin-water solution of gentian violet, but best with carbol-fuchsin. With the less intense stains, especially in the larger forms, there are often portions of variable size and shape which stain faintly. No motility could be detected.

Graupner has illustrated the bacilli with stained peritrichous flagella. He found that motility was rapidly lost, even under favorable conditions in 20 minutes. Beitzke explains the varying expressions regarding motility by this fact, but it is better accounted for by Ellermann, who cultivated the shorter, curved forms in pure culture and found them to be motile spirilla.

The bacilli do not stain by Gram's method. The number of bacilli is variable. In the earlier stages of ulceromembranous angina and stomatitis they are most abundant, and they decrease as the process of recovery advances. When the bacilli and spirilla are most abundant, other forms of bacteria are present in small numbers. As the two organisms decrease, the associated bacteria usually increase. In normal mouths the fusiform bacilli were present in small numbers in smears from saliva, tongue and gums. In the case of diphtheria examined, they were so few as to be found only after considerable search.

The spirilla, also spoken of as spirochete, which are associated with the fusiform bacilli in a large proportion of instances are long and delicate, and present three or four turns. They stain uniformly and much less intensely than the bacilli, and in faintly-stained preparations might be overlooked. They do not stain by Gram's method, being much more quickly decolorized than the bacilli. They are usually quite actively motile, but sometimes not. The association of spirilla with the bacilli was observed in all the cases studied. In general they were in numbers corresponding to the number of bacilli. In the mouths of many healthy persons what appeared as the same spirilla were found, especially about the gums, often in enormous numbers.

Most authors believe that the fusiform bacilli and spirilla are entirely distinct varieties of bacteria, and consider that they act in symbiosis, the spirilla serving to enhance the virulence of the bacilli. Vincent, Niclot and Marotte, Baron, Hess, Oberwinter, etc., have observed that those cases of ulceromembranous angina in which only the bacilli are found are milder than those in which the two organisms are associated. In cases in which deeper destructions of tissues occur, the spirilla

are said to be constantly present. In the case of noma from which material for study was obtained, fusiform bacilli and spirilla were present in the nasal discharge from the beginning, and later in the ulcerative lesions of the gums and cheek.

Some observers have maintained that the bacilli and spirilla are different forms of the same organism (Seifert, Perthes, Sobel and Herrman, Krahn). Most authors do not agree with this, but consider them two distinct organisms. After careful examination of many preparations, both direct from man and from pure and mixed cultures, we have been unable to find any appearances which would support these assertions.

From many of the cases the fusiform bacilli were grown in mixed cultures and from a few in pure cultures. They are obligate anaerobes. Details regarding these cultures are to be found in a former publication.¹ The spirilla have never been cultivated except in mixed culture.

Although the organisms described are found in association with characteristic lesions, the proof that they are the essential etiologic factors is not entirely complete. Further study of pure cultures may be expected to shed more light on the subject.

PATHOLOGY

Athanasiu and others divide the affection into three periods: the onset, characterized by congestion and edema, the formation of the false membrane and finally the period of ulceration. In the majority of cases these three periods can not be distinguished.

The primary location of the disease is usually on the tonsil and edge of the gums. It may extend from these locations to the tongue, lips, even the soft palate, pharyngeal wall and cheek. The stomatitis and angina may occur simultaneously, but each is also observed alone. Extension beyond the common primary locations is not the rule. The deposits on the tonsils are usually irregularly oval or circular. It may be bilateral, but is usually unilateral. The pseudomembrane may be grayish, whitish, yellow, yellowish-brown or greenish in color. It is sometimes described as resembling the pseudomembrane of diphtheria, but usually it is thick, cheesy and friable in character. It may be marked by small hemorrhages (Hecht). The false membrane is usually readily removed, leaving a superficially abraded surface which bleeds easily and becomes again covered by an exudate in a few hours. With the progress of the disease, the ulcer may become much deeper, but shows little tendency to extend laterally. Sometimes the destructive process extends more deeply, leading to the destruction of the tonsils, uvula and parts of the pharyngeal wall (Baron, Bruce and others). As a rule, only one ulcer is present, but sometimes several are observed. The ulcers may become confluent, as was seen in one of our cases. They may be round or oval. The borders are pointed and irregular. The floor of the ulcer is uneven and later shows granulating points. They vary considerably in size. Sometimes the ulceration is very superficial or absent. There was none in three of our cases. The anginas have been classified by Vincent and others as croupous or membranous and as ulcerative, according to whether the ulcerative process is slight or prominent. The surrounding mucous membrane is red and slightly or considerably swollen. If the lesion is not observed at the outset, there appears to be no inflammation.

The submaxillary and retromaxillary glands are usually swollen corresponding to the location of the disease in the mouth or throat. The swollen glands are firm, a

number of small ones usually forming the mass. There is, as a rule, no periadenitis. They rarely suppurate. Raoult and Thiry claim that the glands are rarely swollen except in badly cared for cases, and use this fact as an aid in diagnosis.

Healing takes place slowly after 3 to 45 days. The swollen glands often remain enlarged for some time.

SYMPTOMS

The symptoms vary much with the severity of the disease. Often there are no symptoms or only slight ones, and the lesion is found accidentally. The following symptoms may occur at the onset: Feeling of dryness or discomfort in the throat, dysphagia, lassitude, restlessness at night, loss of appetite, headache, coated tongue, constipation, sometimes diarrhea, vomiting, pains in abdomen, epistaxis, chills and fever. As a rule, there is little or no fever. One of our cases had a temperature of 103.2 F. In some of the other cases the temperature was high, but there were other pathologic conditions to explain it.

One to five days after the onset the local condition is observed. With it the chief symptoms are pain in swallowing, salivation and fetid breath. These do not always occur. Sometimes the dysphagia is slight. The breath may not be fetid if the case is mild or if antiseptic solutions have been used.

If the gums are affected the teeth may become loose. There may be bleeding from the gums, even if they are free from membrane.

Athanasiu speaks of earache and nasal discharge as occurring at this period. Oberwinter also often noticed a nasal discharge and urges the importance of this symptom in young children as directing attention to the throat. We observed a nasal discharge only once. In this case the organisms were found in the nose before they appeared in the mouth.

COMPLICATIONS

Many observers have found no complications. Albuminuria, according to Simanowsky, is frequent, and Bruce and Simonin and others report cases in which it appeared. We observed it twice, but as the patients had scarlet fever it could be attributed to this disease. Herpes at the beginning was noticed by Baron. Conjunctivitis, which Athanasiu gives as a frequent complication, we observed three times. He also mentions anemia as a complication.

The other complications seen by us were gastroenteritis twice and noma of the cheek once.

The following complications have been reported according to Niclot and Marotte: Appendicitis, pseudoreumatism, arthritis, endocarditis, pneumonia, pleurisy, infectious purpura, polymorphous eruptions, edematous patch in temporal region, with discoloration and tenderness (Nicolle).

PREVALENCE

The disease seems to be very prevalent, many cases being undetected because of the mild course. Rodella found the characteristic bacilli in about one-third of 2,000 cases of pseudomembranous anginas from which he examined microscopic preparations. Abel found the organisms in 6 or 8 cases out of several hundred suspected of being diphtheria, and Beitzke in 5 out of 58 such cases. Lüblowitz found the fusiform bacilli in 6 out of 38 cases of ulcerative affections of the mouth.

CONTAGION

Contagion in connection with this disease has been observed by Vincent, Dopfer, Bernard and Auger and others, but for its occurrence close contact is apparently

required Costa says that it may be communicated by means of pipes, pencils, etc. Small epidemics have been observed, especially in families. Seven cases occurred in the Memorial Institute within four months. There was no proof that it was transmitted from one patient to another.

DIAGNOSIS

The diagnosis is made by the finding of the characteristic fusiform bacilli in the smears prepared from the exudate, usually in association with the long, more faintly staining spirilla. The organisms are not stained by Grams method. It is always necessary to exclude diphtheria by means of proper cultures, as the diphtheria bacilli may be associated with the fusiform bacilli. Syphilitic lesions must also be excluded by the history and associated signs of the disease.

PROGNOSIS

The prognosis is usually good, but it must not be forgotten that considerable destruction of tissue may occur in rare cases, and that gangrenous processes and noma of the face may develop from these ulceromembranous lesions as occurred in one of our cases. According to Vincent and Richardier, the prognosis is bad in children. Baron Bruce and others have noticed a tendency for this disease to recur after partial or apparently complete recovery. We observed this once.

TREATMENT

Filator and Nevegin consider chlorate of potassium administered internally a specific for the disease. Crandall also found that chlorate of potassium did most good. Baron believes therapeutic applications of little use. Various antiseptic solutions have been used locally and tincture of iodine is spoken of with favor. Because of the anaerobic character of the bacilli, peroxid of hydrogen is most useful and should be applied directly to the seat of disease. Sobel and Herrman made use of a 3 to 5 per cent solution of silver nitrate, applying it daily to the diseased areas. At the Memorial Institute success attended the use of peroxid of hydrogen, followed by the following solution:

R	Acidi carbolici	3ss	2
	Zinci sulphocarbolicis	5ii	8
	Aqua q s ad	5vi	180

PREPARATION OF A SERUM FOR THE TREATMENT OF EXOPHTHALMIC GOITER *

[Contribution from the Huntington Fund for Cancer Research, Department of Experimental Pathology, Cornell University Medical College.]

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The serum treatment of exophthalmic goiter, or Graves' disease, is not new. In addition to the ordinary medicinal measures which have been employed, many attempts have been made to obtain some specific of animal origin which would work as beneficially in exophthalmic goiter as thyroid extract does in myxedema. A few of these attempts have been partially successful, and since I wish to compare the serum which we have used with that tried in previous experiments, I will outline briefly the present condition of the problem.

The fundamental ideas for serum therapy in this disease are, first, that the symptoms are caused by an hyperactivity of the thyroid gland, and, second, that the physiologic action of the thyroid secretion is to neutralize some toxin arising in the course of metabolism. With

our present knowledge the thyroid origin of the symptoms of the disease seems the most rational of any thus far proposed, and, while not committing myself to it absolutely, I shall accept it without further comment for the purposes of the present discussion.

The success attained in the thyroid extract treatment of myxedema suggested that a similar means be employed with exophthalmic goiter. Thyroid extract, it was soon found, aggravated the symptoms in nearly every case, and since the typical picture is that of an intoxication of thyroid origin, attempts have been made to neutralize the products of the excessive activity of the gland by providing an oversupply of the toxin with which it is supposed the thyroid secretion normally combines. Theoretically, this combination detoxicates both components. Among the earliest experiments to make therapeutic use of this idea was that of Burghardt and Blumenthal,¹ who injected into a patient suffering from exophthalmic goiter blood obtained from a case of myxedema. Two hundred and forty cubic centimeters of a mixture of equal parts of blood and salt solution were administered during a period of eight weeks, and during the treatment the patient showed very marked improvement. Theoretically, the blood of animals which have been deprived of the thyroid gland should contain an excess of the metabolic toxin, ready for combination with the thyroid secretion. Ballet and Enriquez,² and later Burghardt and Blumenthal,¹ used the serum of thyroidectomized dogs, both orally and by hypodermic injection, with beneficial results.

More recently, under the leadership of Moebius,³ such a serum obtained from thyroidectomized sheep has come into wide use. This serum is now a commercial product, sold under various names, such as thyroidectin, anti-thyroidin, etc. Some favorable results have been reported from its use, but in the hands of most observers the treatment has not been of marked benefit. The difficulties of practical application of such a serum as this are great. Animals react quite differently to thyroidectomy, and the impossibility of standardizing the serum, together with the great variation in the dosage and means of administration, may account for some of the discrepancies in the results. It must be said, however, that the nature of this toxin and its presence in the serum of thyroidectomized animals has not been satisfactorily investigated.

The other method, which depends for its efficacy on an inhibition of the thyroid by means of a cytolytic serum, has had thus far only a very limited trial and the results have not been encouraging. I believe there are good reasons why the experiments have failed, and these will appear evident during the discussion. Numerous investigators have endeavored to develop a serum having cytolytic action for the thyroid gland. The method of preparing the serum has been uniform in nearly all of the experiments, but the results reported are quite variable.

In this country the first attempts were made by MacCallum,⁴ who injected emulsions of dogs' thyroids into geese at weekly intervals until they were supposed to be immune. He obtained some characteristic effect on injecting the serum thus prepared into dogs, but in most cases the animals became very much emaciated and cachectic without showing symptoms due to hypothy-

1 Burghardt and Blumenthal. *Deutsche Med Woch*, 1899, p. 627.

2 Ballet and Enriquez. *Congrès des Allenistes et Neurologistes Français de Bordeaux*, 1895.

3 Moebius. *Neurologisches Centralb*, No. 22, 1901.

4 MacCallum. *Medical News* Oct. 31, 1903, 820-828.

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roidism, although many of the injections gave a fatal result. In only one case did he find any lesions in the thyroid gland. His work has been confirmed by Yates,⁵ who made an antiserum by injecting dogs' thyroids into roosters or geese. He could demonstrate no cytolytic effect *in vivo*, although he had good test-tube reactions.

Portis⁶ has worked along much the same lines. In his experiments goats were immunized to dogs' thyroids in three different ways. First, by using the crushed glands, second, by injecting the crushed gland, which had first been washed out with salt solution to free it from blood, third, by injecting the colloid matter prepared by Hutchinson's method.⁷

The serum was administered to three groups of dogs in doses of four cubic centimeters per kilo, with the following results. The first serum caused a tremendous reaction, with profound hemoglobinuria. The second caused a good reaction, but only a slight hemoglobinuria. The third group, receiving serum developed by injections of colloid, showed a milder reaction, but no demonstrable hemoglobinuria was noticed. A point of great interest attaches to the fact that the thyroids of all the animals receiving serum were found to be free from colloid matter. No other lesions were found.

Some interesting and important observations have come from the foreign laboratories. Slatineano,⁸ working with a serum made according to the usual method, has been able to produce some changes in the thyroid epithelium, but never the lesions of chronic sclerosis. Following the feeble doses, he observed an enormous overproduction of colloid, which distended the vesicles and at the same time there was a diminution in the volume of the epithelial cells. With large doses subcutaneously, he obtained some necrosis of the glandular epithelium. When the serum was introduced directly into the carotid artery he observed a necrosis of the thyroid epithelium on the side corresponding to the artery injected, the vesicles were found opening into one another, while the colloid had completely disappeared. In the opposite thyroid, which had been in contact with less serum, he observed a complete disappearance of the colloid. These observations confirm a similar one made previously by Portis.

Two Belgian investigators, Demoor and Van Lint,⁹ have reported results so diametrically opposite to those of other students of the subject that it is difficult to believe in their accuracy. Their serum was made by injecting guinea-pigs or rabbits with an emulsion of dogs' thyroids. Their method was somewhat peculiar, in that they made their injections on every second or third day and bled the animals three days after the last injection, whereas the usual method is to make the injections at intervals of five to eight days and bleed six to eight days after the last injection. Demoor and Van Lint state that their method is essential to obtaining an active serum and that if the usual method was followed they failed to get results. Their experience in this respect is quite unique. It may be true, but it is contrary to the experience of other investigators, and it does not harmonize at all with my results with hepatotoxin and nephrotoxin, nor does it accord with the established principles of immunity. They also found that it is necessary to inject an emulsion of the whole gland in order to produce an active serum. Injection of iodothylin, thyreo-

globulin or nuclealbumin did not yield an active serum. It is their belief that there is present in the whole gland some substance as yet unknown on which the development of an active serum depends. They state that when a serum made by their methods is given intravenously to dogs it causes all the symptoms of a strong and quickly fatal hypothyroidism. From a study of their methods and results I am inclined to believe that they were dealing with a hemolytic serum, which had little, if any, specific action on the thyroid gland.

The preceding summary of the more important experimental studies of thyroid cytolytins gives an uncertain basis for clinical application. Attempts have been made, however, to produce cytolytic serum having therapeutic value in the treatment of exophthalmic goiter. Murray¹⁰ has recently published his experiments in this direction, and, although they are faulty in many particulars, I have great respect for the honesty and accuracy of his conclusions. In his first experiment rabbits were fed on sheep thyroid extract for a month and the serum from the animals was then used in the treatment of two cases of exophthalmic goiter. The dose of serum was at first 5 minims once a day and later 7 minims three times a day, given by mouth. Both cases improved under treatment, but not more than might be expected from rest with the common medicinal measures. (It is open to serious doubt whether Murray could develop an antiserum by the method which he employed, *viz*, feeding thyroid extract to the rabbit.) In his later experiment Murray began by giving subcutaneous injections of sheep thyroid extract to a goat, but since so many abscesses resulted from this procedure he changed the method of administration and gave the extract by mouth for a period of two months. The serum from this goat was used in treating two cases. The serum was given by mouth, beginning with 5-minim doses three times a day and gradually increasing to 20 minims. In one case there was a gain of eight pounds in weight, but Murray concludes that the improvement noted in both cases was no more than usually takes place on ordinary treatment, and that no special effect could be attributed to the serum. It may be objected that the method of producing the serum in these experiments was faulty. The goat is not sufficiently far removed from the sheep as an animal species to serve well for such a purpose, and administration of thyroid extract by mouth has never been shown to develop immunity. Even though some degree of immunity had been obtained, there is no reason for supposing that it would be in any degree efficient for antagonizing the pernicious activity of the human thyroid gland, since its antitoxic properties would have been developed by a biologically different proteid than the one it was expected to oppose *in vivo*. It would be quite as logical to use diphtheria antitoxin in the treatment of tetanus.

The serum which I have prepared has a somewhat different experimental and theoretical basis. During the last year I have been interested in studying the preparation and action of cytolytic serum having a higher degree of specificity than that which has been reported previously. A paper¹¹ has been published recently giving some of the results of this work, so I shall give here only a brief summary of it.

The cytolytic serum studied by other investigators has been made in nearly all cases by repeatedly injecting an organ pulp into the peritoneal cavity of some animal of an alien species. The serum thus developed may show

⁵ Yates Univ. of Penn. Medical Bulletin, vol. xvi 1904

⁶ Portis Journal of Infectious Diseases, vol. 1 1904, p. 127

⁷ Hutchinson Journal of Physiology vol. xx 1896 p. 474

⁸ Slatineano C. R. de la Soc. Biol. vol. lxx 1906, p. 76

⁹ Demoor and Van Lint Ref. Biochem. Centralbl. No. 2, 1904 p. 106

¹⁰ Murray The Lancet, Nov. 11, 1905

¹¹ Beebe Jour. of Exper. Med. Nov. 1905

some attraction toward the particular organ used for injection, but in most cases such action has been obscured by the very marked hemolytic and hemagglutinative properties. Indeed, Pierce¹² believes that much of the effect of the hepatotoxin and nephrotoxin developed by injection of the full cells is due to the agglutinated corpuscles forming small thrombi with resultant focal necroses. Practically all observers have noted a severe hemoglobinuria following the administration of such a serum. The results obtained have, therefore, justified the conclusion that it is impossible with such serum to cause definite lesions in one organ without at the same time injuring other organs. The serum has no morphologic specificity.

The cytolytic serum with which my experiments were made by was developed by injecting the nucleoproteids of some organ, such as the liver or kidney, instead of the whole organ ground to a pulp. The reasons for selecting nucleoproteids for this purpose are obvious. We know that the nucleus is the most important morphologic and physiologic part of the cell. If specificity is a function of any of the cell constituents, the nucleus must be most intimately concerned therein. They are the chemical basis for the most fundamental of the cell processes, and it seems to me that it is not unreasonable to suppose that by using only the nucleoproteids for the development of the serum a considerable amount of what we may call extraneous material has been excluded, and only those compounds have been included which have to do with the particular work of some selected group of cells.

Because of the biologic differences in proteids it is necessary to develop the serum from the proteids of the same species of animal as we use later for testing its activity, that is, nucleoproteids from dog organs were injected into rabbits at seven-day intervals until five injections had been made, and the serum from these rabbits was then tested on dogs. We could not expect such a serum to have much effect on the organs of cats or guinea-pigs. Test-tube reactions show that a serum made by injection of nucleoproteids is much more specific than the sera made from the full cells. The results obtained by the biologic test, however, are by far the most interesting outcome of the work, and in confirmation of the test-tube reactions show that such a serum is highly specific in its action. If the serum has been developed by injecting nucleoproteids from the dog liver, we find that its administration makes the animal very sick, and if the dose has been as much as 2 c c per kilo, the result is fatal. This dose is very much smaller than has been used by most previous investigators, but is still about 100 times larger than the dose of thyrotoxin, which we used later as a therapeutic dose in treating the exophthalmic goiter patients. Postmortem we find that the liver has been badly damaged, while the other viscera have not been injured. Other observers have found that a serum made from liver pulp invariably causes lesions in the kidney with albuminuria. The serum made from the liver nucleoproteid, on the other hand, has not produced renal lesions, and at no time has there been albuminuria following its use. However, if the serum has been developed by the injection of kidney nucleoproteids its administration causes an acute nephritis, which may be quickly fatal. In some cases 50 per cent of the total nitrogen in the urine has been in the form of albumin.

A constant phenomenon was observed in what I have called the latent period. To illustrate. In some cases the nephrotoxin was given in small repeated doses intra-

peritoneally, and in others in one large dose intravenously. In the latter case the animal showed an immediate reaction, but in ten hours had completely recovered and remained normal for three to five days. At the end of this interval a slight amount of albumin appeared in the urine, and the condition grew rapidly worse, until by the eighth or tenth day the animal had a very severe nephritis. The few days which elapsed between the administration of the serum and the appearance of the albumin is the latent period.

Antisera made by the injection of nucleoproteids are not absolutely specific, for they have a weak hemolytic and hemagglutinative action. At such dilutions as are used *in vivo*, however, there is neither lysis or agglutination of the blood corpuscles. This statement is based on test-tube reactions, and it may be that the conclusions do not hold for the inoculation experiments. Without following the details of this work further, I may say that from it we have drawn the conclusion that it is possible by the injection of the pure nucleoproteids of a selected organ into the peritoneal cavity of an animal of alien species to develop a serum having a high degree of specificity in its action toward the selected organ.

At Dr. Rogers' suggestion I endeavored to apply the principles which had been determined in the work with hepatotoxin and nephrotoxin to the preparation of a serum which would have cytolytic action on the human thyroid gland and therefore be of therapeutic value in exophthalmic goiter. Just at this time we were fortunate in securing an autopsy the thyroid glands from two fatal cases of the disease, and it seemed best to make the first experiments with them. The problem is not precisely similar to that of the former work. We do not wish to produce a definite lesion in the gland or injure it to the same degree as we did the livers and kidneys. The ideal result would be an inhibition of glandular activity which would be sufficient to restore a more nearly normal condition of affairs. It seemed to me, also, that the problem was not simply one of producing a cytotoxin of some decided specificity for the thyroid, but that account must be taken of the fact that the thyroid secretion probably has toxic action, and we should endeavor to neutralize that as well as inhibit the gland. A brief consideration of the proteid constituents obtained from the thyroid will be necessary to understand how these two factors influence the work.

Three sorts of proteid may be obtained from a saline extract of the gland, viz. nucleoproteid, globulin and albumin. The colloid matter contains globulin and albumin, while the nucleoproteid comes from the nuclei of the secreting cells. In the older literature the globulin was confused with the nucleoproteid. Oswald¹³ has shown in a number of researches that the globulin is the iodine-containing proteid of the gland and that it alone is responsible for the peculiar physiologic activity which the whole gland has. Accordingly we isolated in pure form the nucleoproteids and thyroglobulin from the Graves' glands at our disposal. The method of isolating the nucleoproteids was the same as that followed in the previous work with dog organs and has been described fully in the paper¹¹ already published. The globulin was precipitated by half-saturation with ammonium sulphate, and, after filtration and washing, the excess of salt was removed by dialysis. Some injections were made from the fresh proteids, but the larger portion was dried at low temperature for preservation. A mixture of the two proteids was injected into rabbits. The nucleoproteids were included in this mixture be-

¹² Pierce "Studies from the Bender Hygienic Laboratory," 1904, 1.

¹³ Oswald Virchow's Archiv, vol. clxix, 1902.

cause I wished to produce some cytolytic effect on the thyroid gland, and the globulin because I hoped thereby to develop an antitoxin to counteract the toxic symptoms. We have been accustomed, therefore, to speak of our serum as having both cytolytic and antitoxic properties, but our only reasons for so speaking have been the theoretical ones just mentioned. It may be that a serum made from the globulin portion of the gland would have cytolytic action. Portis, however, did not find that his serum made from the colloid of the gland had much cytolytic effect. A serum made from the nucleoproteids alone may have antitoxic properties, but I should not expect such behavior, *a priori*, because the nucleoproteid is not the portion of the gland responsible for its toxic effects. I am certain, however, that the whole gland is not essential to the production of a potent serum, and it seems not unreasonable to conclude that the nucleoproteids are as intimately concerned in the production of thyreotoxin as they are of hepatotoxin and nephrotoxin.

The rabbits were given injections of the proteids intraperitoneally at five-day intervals and were bled on the eighth day after the last injection. The earlier serum was developed from larger quantities of proteid than the later, because our supply of proteid would not permit us to continue such liberal treatment as we had given at first. I believe these smaller injections did not produce so active a serum. The amount of proteid given at each injection varied somewhat with the size of the rabbit and his reaction to the treatment. During the first two weeks a six-pound rabbit would generally lose one pound in weight, but this was followed by a slow gain to nearly or quite the original condition. The animals were bled from the carotid artery into sterile tubes and the serum poured off after the clot had been allowed to contract for twenty-four hours in the refrigerator.

I believe that the results of the therapeutic application of the serum are more than coincidence and that an impartial consideration of the clinical evidence must lead to the conclusion that improvement and, in some instances, recovery has been caused by the administration of the serum. The physiology and pathology of the thyroid gland are so obscure that such a means of treatment as the employment of a cytolytic serum can not be applied as yet with a high degree of intelligence. There must be some degree of experimentation with each patient. An active antiserum made from human tissues is capable of doing a great deal of harm and must be applied with great caution. It can not be said of such a serum, as it often is of tetanus or diphtheria antitoxin, that it may be used in liberal quantities because it will do no harm even if it does no good. The therapeutic dose is a very small one. Alarming reactions have followed the injection of one cubic centimeter of the serum. I do not claim that the serum is absolutely specific. We have only the clinical evidence on this point backed by the analogy with the hepatotoxin and nephrotoxin, which is imperfect because those were developed from nucleoproteid alone while the thyreotoxin has come partly from the globulin injected. In fact we have produced just enough light to intensify the darkness.

The work has suggested more questions than it has answered and very naturally we have now experiments in progress to determine whether a serum can be made from normal thyroids which will be efficient therapeutically. No definite statements can as yet be made in regard to the matter, for in view of the lack of conclusive experimental evidence personal opinion is of no consequence.

THE TREATMENT OF EXOPHTHALMIC GOITER BY A SPECIFIC SERUM*

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The most generally accepted theory of the direct causation of the symptoms of exophthalmic goiter, or Graves' disease, is overactivity of the thyroid gland, and the active portion of its secretion is similarly believed to be a globulin containing iodine, called thyroglobulin. In the attempt to neutralize this secretion or check its production several schemes for serum or allied methods of treatment have been tried. Among these may be mentioned the serum of thyroidectomized dogs drawn after the animal had been operated on and had developed symptoms of athyroidism, the serum of a patient suffering from fully developed myxedema, the serum and the fresh and dried blood and the fresh and dried milk of the thyroidectomized goats, commonly known as Mobius serum, the serum of herbivorous animals which had been fed for varying lengths of time on the thyroid glands of animals of another species, and the serum of animals into which emulsions of the thyroid glands of another species had been injected. Conflicting results have been reported for all these, but they generally agree in a failure to cure.

While assisting last year on the clinical side of the work in some experiments for the production of cytotoxins, conducted by Dr. S. P. Beebe in the laboratories of the Cornell University Medical College, I was greatly impressed with the specific character of a nephrotoxin which he had made from dogs' kidneys. The principle seemed directly applicable to the treatment of exophthalmic goiter, and as I obtained at this time two of what are clinically and in the gross the large, soft, cellular thyroids of exophthalmic goiter, I induced Dr. Beebe to make from this material a thyroid cytotoxin for man in the same manner as he had already made the kidney cytotoxin for the dog. The glands were ground to a pulp, extracted with normal salt solution and the coarse fibers strained off. The rather thick, cloudy filtrate was then made frankly acid with acetic acid and a heavy precipitate of nucleoproteids resulted. The supernatant liquid was then syphoned off and half saturated with ammonium sulphate, which carried down the remaining nucleoproteids and the globulins including the thyreoglobulin or supposed active secretion of the thyroid gland. These precipitates were combined, and after removing the neutral salt by dialysis were, to some extent, injected while fresh into rabbits. The major part of the precipitate was, however, dried for preservation. The rabbits showed a severe reaction to these injections and some died (one, at least, with many of the symptoms of exophthalmic goiter) and thus wasted our precious material, which at first was used freely. After about five weeks of this treatment the rabbits were bled to death from the carotid and the serum thus obtained from these first inoculations I shall call serum A.

Serum B was made in August from the dried precipitate, then four months old, of nucleoproteids and thyreoglobulin obtained from these diseased glands. The powder was dissolved in normal salt solution and injected as before into rabbits, but the demand for the finished product was urgent and somewhat more haste was employed than in the preparation of serum A.

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The preparation of serum C in a similar manner was begun a month later, or when the dried powder was about five months old, and the animal inoculations were conducted with care and slowly, but with as little of the original material as would produce a reaction, since by this time its value was becoming apparent and the quantity of the dried precipitate very much decreased.

Serum D was made from the normal human thyroid gland as obtained at autopsy in the morgue, and has not proved satisfactory. The glands which have generally been received several days after death were ground to a pulp, extracted with normal salt solution and the liquid strained through gauze. The filtrate was then made acid with acetic acid and, as very little precipitate resulted, dilute alcohol was added. The precipitate thus finally obtained was suspended, while fresh, in normal salt solution and injected into rabbits at intervals of about five days for some four weeks. The animals showed little or no reaction to the treatment with this material, and thus presented a noticeable difference from the previous experience.

The results produced by these sera are best explained by a brief summary of the case histories.

A F, suffering from typical exophthalmic goiter, received a total of 30 minims of serum A when it was fresh, and showed a pronounced local and constitutional reaction about four days after the first dose. Recovery took place gradually and the condition was practically normal at the end of some five months.

E R, suffering from typical toxic exophthalmic goiter, received 15 minims of the fresh serum A at one dose, and had a bad cardiac dilatation five days later, but recovered completely during the next three or four months.

M B, suffering from a severely toxic exophthalmic goiter, received 1 cc of the fresh serum B in divided doses with a pronounced reaction four days after the first dose, but has now (five months later) recovered from practically all symptoms.

A P, suffering from a severely toxic form, also changed from a moribund to a convalescent condition within three days after the administration of 2 cc of serum B and 2 cc of serum C when each was about three months old. She seems now to have almost completely recovered. There was no bad reaction whatever.

E M, with a typical form of the disease, showed a similar postponed reaction and slow recovery after a small initial dose of serum C when it was a few weeks old.

L M, suffering from typical toxic exophthalmic goiter, received a similar dose of serum C when it was two months old, and, without any noticeable reaction, was changed from a moribund to a convalescent condition and has now completely recovered.

F E, suffering from an atypical form of the disease, showed a severe postponed reaction to serum C when it was a few weeks old and then recovered gradually.

The other three cases showed the same peculiarity, but have not exhibited much or any improvement for reasons revealed in the case histories.

Thus ten cases have been treated with sera A, B and C with a result of three apparently perfect cures, three rescued from a critical condition and now approaching a cure, and the others more or less improved, their improvement depending, as it now seems, on several factors which it is legitimate to attempt to explain. In this explanation, however, it must be borne in mind that a great deal is inference or supposition and very little has been definitely proved.

It was noted in these cases that the first serum made by freely inoculating the rabbits with the fresh precipitate of nucleoproteids and thyroglobulin of the diseased human gland produced the best results with the smallest

dose and the most reaction (serum A). The serum made later, when this precipitate from the diseased thyroid was several months old, was made in some haste and still proved effective, but required a larger dose and produced somewhat less reaction (serum B). The serum made still later (serum C) was derived from smaller injections of the dried precipitate carried over a slightly longer period and was about the same as serum B, but apparently less efficient than serum A. Each of these produced no appreciable result after injection until the lapse of at least twenty-four hours, and then there was some improvement in the subjective symptoms. Some four or five days after the first dose, and on the second or third repetition of the injection, there developed a severe erythematous erythema, with swelling all around the point of puncture. This would be intensified by another dose in a different part of the body and was accompanied by a sharp rise in temperature and very unpleasant cardiac disturbance in the form of irregularity or great rapidity and (in one case) sudden extreme bradycardia. The animals treated with the specific cytotoxin for the kidney, liver or pancreas would show little or no reaction for several days, perhaps a week, and then suddenly sicken and die, and at autopsy the organ under investigation would be found to be the one chiefly affected. The kidney and liver consist almost entirely of secreting cells, and so supply a large amount of definite material, presumably nucleated secreting cells, for which the inoculated animal can produce antibodies. The normal thyroid, on the other hand, contains a good deal of stroma, blood vessels and colloid, but comparatively few secreting cells, and to make a cytotoxin which is specific in a pronounced degree for any given kind of cell it seems to be necessary to use that kind of a cell for the inoculations, not only in considerable quantity, but as much as possible, to the exclusion of all other kinds of cells. Therefore, to make a cytotoxin for the thyroid gland there must be obtained, in the first place, a great number of the secreting cells of this organ, and then as few as possible of the cells of the stroma and blood vessels which are common to all other organs and tissues.

Whether this is true or not, the precipitate or nucleoproteids obtained from the ground-up Graves' thyroid, suspended in salt solution, is very abundant and comes down in a flocculent mass, while the similar precipitate from the normal gland is almost inappreciable and has to be obtained by a slightly different method. The supernatant liquid over the first heavy precipitate from the Graves thyroids contains, as stated previously, some suspended nucleoproteids, and with them the globulins including the thyroglobulin or supposed active secretion of the organ. These were precipitated separately by ammonium sulphate and then combined with the first precipitate of nucleoproteids by acetic acid, and after removing the neutral salt, injected into rabbits at intervals of five days for four weeks. There were thus produced antibodies for both the cells and their secretion, in other words, a serum which may be supposed to contain both a cytotoxin and an antitoxin. These terms are used only as conveniences in an attempt to construct a working hypothesis, and it must be remembered that the difference between a cytotoxin and an antitoxin is by no means clearly understood.

In the experiments with a cytotoxin designed to be specific for a dog's kidney, the animal showed no reaction for several days and then died from an acute nephritis. The severe reaction with the thyroid serum in the patients whose histories are given took place after a corresponding interval succeeding the first dose if the

serum was fresh, but if it were old the reaction seemed to decrease in proportion to the age of the serum. At the same time the permanence of the effectiveness of the dose also seemed to decrease, and hence the bad qualities of the medicament can not be eliminated by storing it in an icebox for several weeks or months. The bacterial cytotoxins have somewhat the same perishable characteristics.

But there is also some appreciable improvement, especially in the nervousness and sleeplessness which takes place within a few hours of the time of administration of this serum, and this property still persists apparently as strong as ever in some of serum B, now five months old, and as the thyreoglobulin was contained in the material originally used for inoculating the rabbit it is reasonable to imagine an antibody for it, or an antitoxin, in the serum. This also is comparable with the bacterial antitoxins, which persist unchanged for a long period and when administered act quickly.

If this double content of the serum can be granted, the one for lack of a better term called a cytotoxin, having a late and cumulative effect in suppressing the action of the thyroid secreting cells, and the other, an antitoxin nullifying the action of the excessive thyreoglobulin, much helpful light is shed on the clinical phenomena. We may imagine, and it is not incompatible with the clinical facts, that the fresh serum stops the active poisoning and a little later inhibits the activity of the gland, and in doing so in some manner breaks a vicious circle, without destroying the thyroid, leads to a gradual resumption of its normal function. If, however, the serum is old or deficient in the supposed cytotoxin element, there is only a temporary suppression of the pathologic process, which in course of time is again in evidence.

The above statements summarize our present knowledge of and experience with this remarkable serum, and are admittedly very incomplete and unsatisfactory. It requires weeks to prepare the serum and months to observe its effect, and as the subjects all have to be human and the medicament is evidently dangerous its administration has to be conducted very carefully and slowly. Any error in the preparation, or any bacterial contamination, means a "start all over again," but we have always kept a little of the original very effective material on hand to use in critical cases. The ordinary material on are sufficiently sure of any particular product that happens to be ready. I have purposely omitted all mention of the etiology, pathology and symptomatology of exophthalmic goiter, as this involves another uncertainty in this treatment. In fact, I do not believe that a serum made by this method will cure all cases of the disease, as there have been very marked differences in the individual reactions. As a general rule, although it is not invariable, those who have had the most reaction have progressed the most satisfactorily, and it does not seem to hasten recovery if the injections are constantly pushed. On the contrary, this seems to retard the progress. Then there is a certain type of cases which has seemed peculiarly refractory and liable to relapse. These patients have no exophthalmos, but they do have an asymmetrical thyroid, that is, one with a cystic or adenomatous enlargement. They complain chiefly of digestive disturbance, with fermentation and pain, which may be abdominal or thoracic, and with this disturbance there is generally dyspnea and labored breathing. They also have marked weakness, a soft, feeble pulse, and either

an intermittent or constant tachycardia. They are emotional and generally "nervous." Operative removal of the adenoma or cystoma is usually futile in that it does not cure the symptoms, and the interference may be dangerous, as I have more than once observed.

The bad chronic cases of the disease, with dilated and hypertrophied heart and the secondary lesions following imperfect circulation, should, of course, recover much more slowly than those which are uncomplicated or of less duration. I believe that when the thyroid is removed by operation for exophthalmic goiter and an acute thyroïdism follows, it can be checked by serum C, and I have preserved some of it for this purpose, but have not yet had the opportunity of thus testing it.

The difficulty of obtaining the normal human thyroids in a sufficiently fresh and uncontaminated condition (to say nothing of the pathologic thyroids) and the technical difficulties in the manufacture will probably prevent any commercial use of the product. The least error or variation in the complex mechanical or chemical methods employed by Dr Beebe may spoil the finished serum or make it extremely dangerous, as I have more than once verified. A very skillful chemist, experienced in biologic work, is a necessity.

I can only say in closing that typical exophthalmic goiter has been cured by serums A, B and C, and this experience can be repeated with a serum made and administered in the same way, and if it ultimately proves to be necessary for some poor patient to die or to be operated on to obtain the pathologic thyroids of exophthalmic goiter in order that others may be saved it would indeed be a scientifically grim romance.

CASE 1—History.—A. F., 27 years old, single, saleswoman, had always been nervous and excitable, and as a child remembers "hearing in her ears," the peculiar buzz or whirl synchronous with the pulse which so many of these patients find annoying. She first noticed "palpitation" and dyspnea on exertion and attacks of diarrhea and shortly afterward, or when about the age of 24, she observed the goiter and exophthalmos.

Examination.—When I first saw her in May, 1903, she had all the typical signs of the disease with a soft symmetrically enlarged thyroid, moderate exophthalmos, rapid respiration, which became dyspnea on exertion, marked pulsation of the great cervical vessels and a soft compressible pulse of 120 to 130. Her last physician had been giving her small doses of a dried thyroid preparation, which she thought made her feel a little stronger. This was stopped and small doses of a tassium iodid for several weeks gave perceptible though temporary benefit to the tachycardia. When this medication had lost its effect, she received thyroidectomized goat serum by mouth, capsules of dried blood of the goat, "didymine," bromid of quinin, aconite, belladonna and many other usual and unusual medicaments, without benefit. In the winter of 1904-05 she began to lose ground and could work only a portion of each month. She finally weighed about 90 pounds and complained constantly of the heaving heart action, sleeplessness, dyspnea and weakness. There were also all the usual symptoms, with a large soft thyroid and pronounced exophthalmos and pulse of 120. She was able to walk, though with difficulty.

Treatment.—April 15, 17 and 19 she received first 5 then 10 and next 15 minims of serum A. April 17 she said the palpitation and sleeplessness during the previous night had been much improved, but there was no other noticeable change except some erythema in the right arm about the point of inoculation. After the injection in the outer arm on the 19th, this erythema became much intensified and a much worse one developed around the last injection and suggested a saturation of the system with the serum. There was some fever, and she felt sick enough to go to bed. This passed in a few days, and at the end of a week there was a decided improvement.

The heaving heart action, the carotid pulsation, the sleeplessness and most of the nervousness had disappeared, and though the pulse was still about 120, it was of much better quality. At the end of another week she had gained about 10 pounds in weight and resumed her work of standing daily behind a counter.

Result—There was a steady though not very rapid gain, which was hastened greatly by a residence at the seaside during August, and on her return the exophthalmos had entirely vanished, but a slight goiter even now can be felt, though not seen. She says that she can note by the size of her collars that each month, since the change began last spring, the neck has decreased in circumference, and at present it is as it was when she considered herself well. She now has a good figure, and looks and apparently is perfectly healthy.

CASE 2—History—E. R., aged 37, married, showed the first signs of the disease in the form of goiter, exophthalmos and tachycardia about twelve years ago. Every conceivable treatment was tried without more than temporary improvement. During these years she bore two children to full term, and during gestation the disease was scarcely noticeable, but after the birth of each child it returned within a few weeks and caused much disability. She received the thyroidectomized goat serum, the dried blood and the milk without the least benefit. Iodid of potassium in small dosage had at one time some temporary effect in slowing the pulse. Year by year the disease was very slowly but steadily becoming worse. In the spring of 1904 a bad anemia developed, which was relieved somewhat during the summer, but recurred after the winter of 1905, and in April the pulse ranged between 130 and 150 and the patient had to spend most of the time in bed. The hemoglobin was at this time 46 per cent, and the red cells 3,600,000. The exophthalmos was pronounced, and there was a large soft goiter.

Treatment—April 25 she received 15 minims of serum A hypodermatically. As she was only my second case and in a serious condition, I fortunately awaited developments. April 30 there was a sudden attack of faintness, followed by labored breathing and dyspnea, and the heart became very irregular and apparently dilated. The pulse an hour or two later ranged between 30 and 40 to the minute, and not for another day did it rise above 40. There was nausea and some diarrhea. With careful nursing and without any medication except a little strophanthus and iron, the condition very gradually improved, and a month later she was moved to the country, where she soon became able to walk.

Result—The "nervousness," dyspnea, sleeplessness and tachycardia reappeared at intervals during the summer, but the intervals grew longer and finally all symptoms vanished about September. The goiter, however, subsided very gradually, and at about the menstrual periods evidently enlarged a little temporarily, but each month was less perceptible and disappeared in August, but could be palpated as late as November. The exophthalmos was not noticed after August or September, and she is now a perfectly normal woman.

CASE 3—History—McQ., 37 years of age, widow, cigarette maker, has had a typical form of the disease for nine years and dated the outset from the death of one of her children. For the past winter she had been able to work at her trade only about three days a week, and she became so weak and short of breath she could with difficulty reach the dispensary. The pulse was about 13 when she was quiet, there was pronounced exophthalmos and a large firm goiter.

Treatment—May 8, 10 and 12 she received first 5 then 7 and next 10 minims of serum A, which was not well preserved. On the 8th there was some erythema and on the 12th it was pronounced, but no perceptible improvement was noted. She disappeared and was forgotten until she came back in November in much the same condition as when first seen, but with a remarkable story. She said that after the last dose on May 10 she had been very ill with a "sore arm and heart trouble," and had been confined to bed for about two weeks, apparently a bad erythema with fever, but with no suppuration. The heart trouble seemed to have been something like a dilatation, as there had been faintness and irregular "thumping" with dyspnea and nausea. This subsided and she worked

steadily at her trade all that summer. The exophthalmos and goiter had been less noticeable, but had now recurred with the dyspnea, tachycardia and weakness. The pulse was 120 in November.

November 10, 13 and 17 she received 1 cc of serum C, then about two months old. On the 17th a rather severe erythema followed, and for a few days she had to stay in bed for weakness, but on the 20th she resumed work. She began to feel stronger, but the physical signs remained, and during December I tried serum D, made from the normal gland by a slightly different process. Three rabbits were employed, each inoculated in the same way, but the serum from each, while giving the same general effect, varied perceptibly in the severity of the resulting symptoms. Within one or two days after the injection the pulse would rise 15 to 20 beats a minute and be accompanied by a heaving heart action perceptible under the clothing. At the same time there was some swelling of the arm, but very little erythema. The exophthalmos was increased and the general nervousness, tremor and weakness was generally intensified. In the course of four or five days these symptoms would subside, and she would feel better than before and raise my hopes and her own. But the pulse remained about 120 or a little more, and this caused me to try another rabbit. No. 320 seemed a little worse than No. 311, but both were bad, and therefore on December 29 I gave 1 cc of serum D from No. 68. December 31 there was considerable swelling and some erythema about the point of injection. January 1, I was asked to go to her house, and found her semiconscious, with a severe headache, pulse of 150 and somewhat irregular, with a heaving heart action and very bad exophthalmos. She was so weak she could scarcely move, and altogether the symptoms looked very serious. But the following day the condition improved, and on January 3 she was able to be out of bed. Evidently, serum D was decidedly dangerous, and produced a stimulating rather than inhibitive effect on the thyroid, and though this was noted after the administration of serum D from rabbits No. 68 and No. 311, the latter had subsequently seemed to produce some benefit at least in the subjective symptoms. No. 320, however, showed none of these feelings of betterment, and the condition which had been perceptibly improved by serum C during the middle of November had become again as bad as ever or worse.

Result—She is still under treatment, and though the physical signs of the disease are not appreciably altered, she says she feels stronger and is able to work every day.

CASE 4—History—M. B. aged 26, single, trained nurse, had suffered from typical exophthalmic goiter for several years, but had been able to do her work. In May, 1905, she was compelled to go to bed, and in July she began to suffer from cardiac dilatation, irregular temperature, nausea, vomiting and diarrhea.

Examination—I first saw her August 10. She was deeply pigmented, extremely emaciated and too weak to move unassisted. The exophthalmos and the firm goiter were not extreme, the breathing was labored and about 35 to the minute the pulse was characteristic, the apex beat was in the left axillary line, there was a very plain precordial heave with each systole, and diarrhea and vomiting were very distressing. She had made all funeral arrangements, and only consented to see me on a friend's solicitation. As we had no serum ready at this time, I supplied her with some thyroidectomized sheep serum, and I think this kept her alive until serum B had been prepared, as the diarrhea and vomiting began to decrease, the respirations became a trifle less frequent and the pulse was better. Improvement was slight.

Treatment—September 11, 13, 15 and 17 she received 1 cc of serum B, and on the 15th there was a severe erythematous swelling of the arm and a temperature of 103.4 F, which seems to have been made a little worse by the injection on the 17th. A marked improvement in the general condition began about this time. There were no more dyspnea, diarrhea or vomiting after the 12th, and on the 19th she was able to get out of bed for the first time since early in June. She began to walk about October 1, which was imprudent with the badly dilated heart. The pulse, though vastly better in quality, remained about 120. The goiter showed little or no

change but the exophthalmos had nearly disappeared, and the pigmentation of the skin was fading.

October 12, 14, 16, 18 and 20 she received 1 c.c. of serum C, to hasten recovery. There was no reaction except some transient erythema, and a slight improvement in the pulse from 120 to 115, and afterward the appetite and the weight increased. October 28 1 c.c. of serum C was administered and 2 c.c. November 3 and 13 without appreciable reaction. After November 1 she began to gain a little more rapidly in strength and weight.

Result—From September 11, when the first of serum B was administered, there has been steady improvement, until now she is able to do ordinary work without difficulty. The goiter within the last month has grown smaller more rapidly than during the previous months and has now, together with the exophthalmos entirely disappeared, and though still a little weak I think this patient can be honestly called cured.

CASE 5—History—E. M., aged 35, single, German dress maker has had typical exophthalmic goiter for about ten years. Three years ago she was forced to spend nearly the whole winter in the German Hospital, and seems at that time to have had severe symptoms, especially cardiac. She was afterward much improved, but for the past year has been able to work only at intervals.

Examination—Her mental condition might be described as "unbalanced." There was only a very slight exophthalmos, a moderate goiter with a small cyst in the isthmus, but marked tremulousness and weakness. The pulse was between 120 and 140, soft and compressible, and there was a pronounced precordial heave.

Treatment—September 21, 22 and 25 she received first 10 then 15 and next 20 minims of serum B without any result until September 26. Then a severe erythema developed around the point of last injection, and was accompanied by some fever and an irregular and very feeble pulse. She became unable to walk, and was sent to St. Francis Hospital, where the hemoglobin was found to be 73 per cent. and the red cells 3,700,000. With rest in bed, some improvement was noted. She received 1 c.c. of serum C October 5, 8, 10, 12, 18 and 23, without any noticeable reaction and with a slow and very intermittent gain. October 16 the hemoglobin had risen to 82 and thereafter progress was more satisfactory. She left the hospital October 26 with a pulse of about 80, but the goiter had only decreased very slightly. During the next menstruation there was a recrudescence of all symptoms, but they subsided at its close, and since then she has been more or less steadily gaining. At constantly longer intervals there have been attacks of tachycardia and breathlessness lasting for a few hours or a day after any of the nervous strain inseparable from her trade, which involves fitting clothes on occasionally irascible customers. After one of these occasions in December she came to me very angry and with a pulse of 150, and complaining that she had been unable to sleep the previous night from worry. I gave her 1 c.c. of serum C, and a week later she reported that she had slept perfectly ever since and I found the pulse after a quick walk 78.

Result—At present she eats and sleeps well, has no exophthalmos and no goiter, except the small cyst which can be felt but not seen and no tachycardia, though the pulse ranges between 80 and 90. But she is irascible and I think slightly "unbalanced" in mind, and small incidents seem to send it up above 100. Nevertheless I think she can be called well physically.

CASE 6—History—L. M. aged 25 single Russian, entered Gouverneur Hospital Sept. 25 1905 with a history of weakness, palpitation and dyspnea for the past five or six years. She had been able to be about until within a week or two. Then there had been an exacerbation of all symptoms and she came to the hospital with a temperature of 101, and a pulse ranging between 120 and 140. She became gradually worse.

Examination—I first saw her October 27. The temperature was then 102, the pulse 148 and the respiration 44 and very labored. The heart was evidently dilated and hypertrophied, and there was a precordial heave with each systole over the whole front of the thorax. The exophthalmos was pronounced and there was a considerable but not excessively large sym-

metrical firm goiter. There was marked pulsation of the cervical vessels. The dry tongue of toxemia with constant nausea, diarrhea and extreme emaciation and weakness completed the picture of the critical condition.

Treatment—October 27, 29, 31 and November 2 she received hypodermatic doses of 1 c.c. each of serum C, then nearly three months old, without any bad reaction except a considerable local erythema. Within twenty-four hours of the first dose the nurse noted a cessation of the nausea and diarrhea, and on the following day the heaving respiration and heart action was evidently less and November 5 the pulse was 110 to the minute for the first time since September 28. There was only a gradual improvement, more evident in the general characteristics of the disease than in the recorded pulse and respiration. Temperature reached normal November 4. November 7 and 14 1 c.c. of serum C was given. On the days following these injections there was considerable local erythema and a rise of temperature to 102, but after November 20 it remained practically normal. She had thus received in doses of 1 c.c. each a total of 6 c.c. of serum C, and on November 23 all the symptoms except a slight goiter had practically disappeared, and the patient had a ravenous appetite and was beginning to be out of bed a few hours daily. Everything pointed toward a complete though slow recovery, but November 24, 26 and 28 each I gave her 1 c.c. of serum D from rabbit No. 311. The first dose was followed on the next day by a bad erythema, a temperature of 104 F, pulse of 136 and a respiration of 44. This subsided within another twenty-four hours, and the next two doses only produced a transient disturbance, but though the general condition, the appetite and the digestion remained good, the pulse continued in the neighborhood of 120 and the precordial systolic heave began to reappear. Therefore, December 6, 8, 10 and 11 each she received 1 c.c. of serum D from rabbit No. 320 without any noticeable change one way or the other. December 22, 23, 24 and 25 she received of serum D from rabbit No. 68, 0.5 c.c., 1 c.c., 1.5 c.c. and then 2 c.c. Within half an hour of the last dose she became flushed and showed an evident swelling of the thyroid, protrusion of the eyeballs very exaggerated and irregular heart action and great dyspnea. This was apparently an acute thyroidism and her condition looked alarming. But the next morning this had subsided, although she remained weak and nervous for several days and did not regain her improvement until I began the administration of another serum, which will form the basis of a future report.

Result—At present (January 17), under the new medication, she seems to have regained the ground lost by this faulty serum D, and the pulse is again between 110 and 120.

This is a somewhat remarkable instance of the extreme complexity of these sera, as only by such experiences did I realize the necessity of adhering exactly to the formula used in the preparation of serum A. Serum D was made from the normal human thyroid, but by a process which differed from the first in an almost inappreciable degree.

CASE 7—History—A. P., aged 29, single, Swedish domestic, entered the Presbyterian Hospital under the care of Dr. W. G. Thompson Dec. 11, 1905.

Examination—She had a temperature of 102, pulse of 120, and respiration of 25 to the minute. There was a slight but perfectly plain soft symmetrical goiter, precordial heave, but no exophthalmos. She was very weak and tremulous, and had some nausea and diarrhea. She gave a history chiefly of this and "nervousness" and sleeplessness for only the past two weeks and had therefore an acute type of the disease. The condition grew rapidly worse, and December 16 the temperature was 104, the pulse 136 and the respirations 36, the tongue was dry and hard, there were ecchymotic spots in various parts of the body and evident thrombosis in some of the veins of both legs. The picture was one of a severe and probably fatal toxemia.

Treatment—December 16 and 17 she received 1 c.c. of serum C and on the 20th 2 c.c. of serum B and no other

medication then or afterward. There was no appreciable reaction and after the second dose there was a very marked improvement in all the symptoms. December 22 the temperature, pulse and respiration were practically normal.

Result—Since then there has been a steady though rather slow progress toward recovery. She is up and around the ward at present with no signs of the disease, except weakness, some anorexia and a soft thyroid which can be felt, but is not perceptible to sight.

This patient has rather upset my calculations, as, judging from other experiences (in chronic cases), she ought to relapse on account of the supposed absence of the cytotoxin in the serum she received. It may prove that only the antitoxin element is needed to cure these severe acute cases as at present she is progressing very satisfactorily.

CASE 8—History—F L, aged 50, single, has always been a nervous woman but ascribes the beginning of her illness to the nursing of a relative, who later died. Soon after this, in 1888, she noted an enlarged thyroid and had dyspnea and tachycardia on exertion. The symptoms continued and she became an invalid. The tachycardia only came on at intervals after exertion or excitement or sometimes spontaneously, and lasted from an hour or two up to several weeks. When in good condition physically and mentally it was not troublesome. The physical weakness was always present.

Examination—I first saw her in October, 1905, and thought she had an atypical form of the disease. She was stout and had a large median cyst of the thyroid with some palpable but soft enlargement of the lateral lobes. There was exophthalmos, and in repose or after resting the pulse was 75 to 80 to the minute, and was soft and compressible. But after exertion or excitement the pulse beats would increase to 120 or 140 to the minute, with dyspnea and a general cutaneous "flushing." She could with great difficulty walk up one flight of stairs. There was also sleeplessness, poor appetite, fermentation, cruetation of gas and frequent attacks of diarrhea.

Treatment—October 6, 8, 10, 12 and 16 she received 1 c.c. of serum C. On the last date a severe erythema developed and prostration, irregular heart action and some fever (101 F). She then began to improve and lose flesh. Improvement was not constant, as dyspnea and faintness with a feeble but not rapid pulse occurred from time to time. These attacks have decreased gradually in severity and frequency, and now are rare.

Result—She now has a good appetite and feels reasonably strong, and at least goes about as any one else, and is what I call well. The cyst of the thyroid is present, but the lobes are not visible, and are not palpable except close to the cyst. The pulse is of excellent quality and not soft and compressible, and averages about 80 to the minute.

The history of this case is that of a type of cases in which there are only a few of the symptoms and in which this treatment ought to be helpful. Generally there is no exophthalmos, but an unevenly enlarged cystic adenomatous thyroid. The chief complaint of the patients is concerning gastric or intestinal indigestion, fermentation, abdominal or thoracic pain, often with dyspnea or labored breathing. There is also extreme weakness, occasional, frequent or constant tachycardia and a weak and compressible pulse.

CASE 9—History—M R, aged 25, married, had been ill for about a year with typical exophthalmic goiter of moderate severity.

Examination—There were all the usual signs. The pulse at my visit was 140 to 150, ordinarily it was about 120, soft and compressible.

Treatment—She received November 7 and 9 1 c.c. of serum C, then about two months old. At the end of a week her pulse was about 80 and of good quality, and all the subjective symptoms were greatly improved, but there had been no marked change in the goiter and exophthalmos.

Result—She received no treatment after this, and lately I have been informed that she is about the same as when I saw her on November 7, but that there has been much less "nervousness."

This was not a fair test, but is included with the others who received sera A, B and C.

In no instance did suppuration develop after any of the injections in these cases.

CASE 10—History—A S, aged 23, single, stenographer, was a champion basket-ball player and an all around athlete. She dates the beginning of her symptoms to a period of prolonged exertion and grief in 1899.

Examination—I first saw her Nov 11, 1905. There was pronounced exophthalmos. The thyroid was symmetrically and very much enlarged, and her thin neck measured 14½ inches over the goiter. She was much emaciated, showed a very marked pulsation in the cervical vessels, including the veins, which were prominent, and had a precordial heave over the whole left thorax. The diffuse apex beat was 12.5 cm to the left of the median line. There was also marked dyspnea on exertion or excitement. The pulse varied from 120 to 140, and was soft and compressible.

Treatment—November 11, 15, 17 and 21 she received 1 c.c. of serum C. November 19 her temperature rose to 102, there was a severe erythema in both arms, but mostly about the point of the last injection, and she felt sick and very weak, though the pulse was about the same (120). November 21 these symptoms had subsided, and she began to menstruate. It is worth recording that the exophthalmos, goiter and nervousness during this period, lasting two days, were all marked, but the pulse had come down to 104, the lowest for many months. The next day, November 22, it was very irregular. November 26 considerable improvement was observed. The neck measured an inch less in circumference, the thyroid was softer and the protrusion of the eyes was less marked, but to hasten recovery I gave on this day and again on November 29 1 c.c. of serum D from rabbit No 311. Shortly after the last dose there occurred an acute exacerbation of all the symptoms, with protrusion of the eyeballs, swelling of the goiter, dyspnea and a feeling of suffocation and then vomiting and diarrhea. For a few hours the pulse was about 160. On the following day these disagreeable symptoms had subsided, and though she complained much of sleeplessness, the pulse became slower, and from December 2 to 6 did not go much above 90. December 10 some diarrhea had appeared, and I gave 0.5 c.c. of serum D from rabbit No 320, which seemed to stop it. December 12 she received 2 c.c. of serum D from rabbit No 320, and within an hour or two went into collapse, and her physician, who was hastily summoned, described the symptoms as those of an acutely exaggerated exophthalmic goiter. The eyeballs protruded so that the lids could not be closed at all, the thyroid was swollen, there was an alternating syncope and extreme restlessness, with an irregular and uncountable pulse, vomiting and later diarrhea. With diffusible stimulants this condition gradually subsided and the next morning all the signs were about as they were when she was first seen November 11.

Result—She did not care to repeat this experience, but since then she has shown considerable improvement, much to my surprise, as I thought I had undone with serum D all that had been gained with serum C.

The Physician's Personality—In dealing with sick men, remarks *American Medicine*, the personal equation of the invalid is the thing to study. It is really as important to know "what kind of man the disease has got as to know what kind of disease the man has got," so that what seems to be trickery is merely winning confidence, on which many an invalid starts to recover at once. It's the kiss on the baby's bruise—satisfying and curative. After all, most of us only want a little sympathy when we are sick, and, like big babies, we pine if we don't get it. Patients pay well for it, and the successful doctor dispenses it with his drugs, while the learned fool, who hasn't any sympathy to spare, is a flat failure, though his treatment in other ways may be therapeutic perfection.

SURGICAL TREATMENT OF GOITER *

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CHICAGO

PATHOLOGY

For a proper understanding of the subject it is necessary to give a short review of the various pathologic conditions which affect the thyroid gland, together with a brief description of the clinical pictures presented by each

Normally, the thyroid gland, a ductless body, is composed of a vascular stroma supporting acini which are lined with a single layer of epithelial cells. The acini contain colloid material which keeps the epithelial cells from contact

Simple Goiter—In simple goiter there is found only increased colloid material, causing greater distention of the acini

Exophthalmic Goiter—In this variety we not only find a greater amount of colloid material, but an increase of the epithelial cells causing an irregular invagination of the lining of the acini. These two varieties may be considered hypertrophies, as they represent normal thyroid conditions exaggerated. Both of these varieties show a fairly symmetrical enlargement of gradual growth

In simple goiter the time of onset is usually between the ages of fifteen and thirty years. Primarily, it may be associated with nervous symptoms, tachycardia, palpitation and tremor, increasing for a time, but which later may subside without treatment. There is no exophthalmos

There has been frequently noted an enlargement of the thyroid gland dating from the early menstrual period, which enlargement in some cases has disappeared without treatment before the thirtieth year. The hypertrophy may be pressure cause dyspnea, difficulty in swallowing, cough and occasionally bloody expectoration, but it should be noted that the latter are all late symptoms

In exophthalmic goiter the age of onset is usually between twenty and thirty years. The most prominent clinical symptoms are intensified arterial pulsation, usually low blood pressure, palpitation, tachycardia, tremor, breathlessness on slight exertion and nervousness. Later the exophthalmos develops

The other pathologic conditions of the thyroid nearly always cause tumors of irregular shape

Acute Suppurative Thyroiditis—L. L. McArthur says this is generally bilateral, usually following septic processes, as typhoid, puerperal fever or pneumonia. He names as symptoms sudden onset, rapid increase in size of neck, pain on motion of head, tenderness on palpation. Pressure on veins and nerves may cause a moist intense headache, hoarseness, dysphagia and even cyanosis of head and face. He mentioned as peculiar symptoms, great thirst, because of difficulty in swallowing, occasional severe epistaxis from pressure interfering with venous return, nausea, vomiting from pneumogastric pressure, hoarseness, vocal cord paralysis and dyspnea

He advocates incision and drainage, with later enucleation of cyst, if continued suppuration. When situated beneath sternum, enucleation primarily, if the patient's condition permits, as in this locality drainage is not a safe practice

In early fetal life the gland contains no colloid material, and the acini are filled with epithelial cells. Tumors resembling such fetal glands are named fetal adenomata

The above and glandular adenomata, in themselves benign tumors are unlike benign tumors elsewhere, in that they are often followed by metastases, most frequently of the bones and the lungs, in the order named

Carcinoma, sarcoma and mixed adenomata are not uncommon. If early in the enlargement bloody expectoration, painful swallowing or vocal symptoms are noted, carcinoma should be suspected. If one waits until a clinical diagnosis is possible metastases will have taken place, which will make operative interference of little avail

Thyroid Cysts—These may develop at any time from childhood to old age. They may be single or multiple. Bloodgood states that if an asymmetrical tumor has been present three years, and is confined to the thyroid gland, it is probably either a benign cyst, adenoma or adenocarcinoma in an operable stage

Cysts are usually slow of growth, but may at any time grow rapidly. They may also vary in size from time to time. There seems to be no relation regarding these growths in the female to puberty or to pregnancy or the menopause

Clinically, some of the patients exhibit no symptoms except the deformity caused by the growth. While others have atypical symptoms of exophthalmic goiter which often disappear after the removal of the cyst, as in Case 2. They may cause annoying pressure symptoms

In a series of cases of this class subjected to operative treatment at the Johns Hopkins Hospital there were no serious postoperative complications or mortality

In considering the surgical treatment of goiter it should be remembered that the vast majority of cases coming to the surgeon have had the benefit of medical or electrical treatment, or both, for a greater or less length of time, and not receiving the relief desired, or growing more uncomfortable, come for advice and treatment. The foregoing leaves practically only the colloid variety to be considered. The class of cases which come to the surgeon bear a striking similarity to the class of cases of appendicitis which he saw but a few years ago, when the patient, neglected, was allowed to pass on from a condition in which there was but a fraction of a percentage of mortality to one where the percentage was great. In reviewing the literature in which cases have been reported in the last five years one can not help being impressed with the above fact. Mayo reports 128 operations, with eight deaths. Eliminating one cancerous and two "who should not have been operated on, as their condition was so aggravated as to almost class them as moribund previously to operation," the mortality rate is low for a class of cases, most of which had been given up after treatment by internists, since the process could not be made to recede, could not be checked, and did in the large majority increase in danger to and loss of virility of the patients. The deaths in cases of Curtis, Kocher, Witherspoon and others all show alike the increased mortality from this same cause

Mayo further states "During the past year two such cases were seen with regard to the advisability of operation, but with a knowledge born of bitter experience both were refused. One died in a week, the other lived a few weeks, both deaths were medical." Do we wait until the belly is full of pus and the patient nearly moribund before advising operation for the removal of an ap-

* Read before Fox River Medical Society

pendix? Should the advising physician any more stand by and see death spreading out its arms by refusing a patient surgical aid when other measures have shown themselves to be of no avail?

OPERATIVE METHODS

1 Injection is by many considered as dangerous as any of the other methods

2 Ligation of the thyroid arteries is as dangerous as removal of the gland, except that in some cases it may take less time than an extirpation

3 Resection of sympathetic ganglion Jonnesco reports fourteen cases of bilateral sympathectomy, with no deaths. He resects all cervical and the first thoracic ganglions and believes it to be the operation of election in primary exophthalmic goiter. However, in exophthalmic goiter of long standing he would first do a partial thyroidectomy and if improvement is not noted in a reasonable time sympathectomy. Curtis reports three deaths in eleven cases. He says that this method gives good results but sufficient time has not elapsed to show their permanency. There are many who believe that the destruction of the efferent lymphatics by this method accounts in a large measure for the improvement.

Improvement from the r-rays probably acts to some extent in the same way, according to Mayo and Murphy. Mayo frequently uses it in conjunction with other treatment from two to six weeks previous to operation.

Thyroidectomy—Kocher reports four deaths in fifty-nine cases of thyroidectomy or ligation of the arteries. Witherspoon, nine cases with one death. He says it is an operation which gives the greatest satisfaction and removes the lobe most affected, usually the right. Improvement is noted almost at once. Curtis reports seven cases with two deaths. Mayo before noted reports 128 cases with eight deaths.

A certain percentage of cases suffer from acute thyroidism following this operation, due in part to trauma of the remaining portion of the gland its subsequent weeping into the wound and absorption. In May of this year the Mayos were practicing cauterization with Harrington's solution to reduce this effect.

The Kocher collar incision gives the best opening, with the least resulting disfiguration and extends across the neck if necessary, to the external border of the sterno-mastoid muscle. If necessary, this muscle can be cut, to be sutured later, so with the sterno-hyoid and thyroid muscles. In dissecting it is best to try to keep just inside the capsule. This will usually be found to be very thin anteriorly, and laterally, but thicker posteriorly. Bleeding points are caught with forceps or tied until the gland is separated, first superiorly the superior thyroid artery and vein being located, double tied and cut between. In dissecting below on the right side one must use care not to injure the recurrent laryngeal nerve, which lies in intimate connection with the inferior thyroid artery. This danger is avoided if dissection is confined to the inner side of the capsule. The lobe dissected off, the isthmus and a part of the opposite lobe may be removed if necessary. The preservation of capsular tissue at the stump end, so that the stump may be covered in, and the removal of any loose lobules, is a point in the technic which goes far toward reducing the tendency to acute thyroidism. The wound, clean and dry, is closed except for an opening left for drainage. After operation the patient should be given salt solution subcutaneously, and this should be repeated at suitable intervals, if the patient has lost much blood or is anemic, to prevent absorption from the wound.

Should thyroidism occur, suprarenal extract given in small repeated doses and atropin and morphin give the most satisfaction.

Just a word as to anesthetics. Local anesthesia has an advantage in that the patient tells at once if the recurrent laryngeal nerve is caught, and can be used in all cases where a general anesthetic is contraindicated.

If, previous to operation, morphin is given, light general anesthesia is safe in the majority of cases suitable for operation.

I have never seen scopolamin used in this class of cases nor have I found any reports of its use.

The results of all operators are practically the same. Marked improvement in from 40 to 60 per cent of cases almost at once, and in nearly all of the rest in a few months following operation. In exophthalmic cases the exophthalmos is the last symptom to disappear.

CASE 1—Mrs S W, aged 39, two children, born in Sweden, came to United States at age of 17 years, housewife.

History—First noticed enlargement of neck twelve years ago, which had gradually increased in size up to two years ago, when it grew more rapidly, attaining such size as to cause marked deformity, hoarseness and at times difficulty in swallowing. During the three weeks previous to operation the pulse averaged 108, the extremes being 96 and 124. About eighteen months before operation she had begun medical treatment, which consisted of electricity and injections, these covering a period of about five months. About two months after, having no relief, she changed advisers and was given thyroid tablets, which she took for a period of about three months without relief, indeed, being more nervous at times than before. When first referred to me she complained that at times she was very nervous, without any apparent or only slight cause.

Operation—On April 18, 1903, entire right lobe, isthmus and about half of left lobe were removed under ether anesthesia.

Pathology—Colloid hypertrophy of the thyroid. Patient made uneventful recovery. In September of same year patient's nervous condition was much better, and pulse at five different times averaged 92, the extremes being 86 and 104.

CASE 2—Miss T B, aged 32, was born and lived in Illinois all her life. Dressmaker for eight years.

History—Patient had marked swelling of right lobe of thyroid for four years, with extreme nervousness and tremor, and had been treated for chronic indigestion because of many attacks of vomiting and diarrhea. At first visit, about six weeks before operation, pulse varied during one hour from 108 to 136. During the four days previous to operation pulse had extremes of 104 to 138. There was no exophthalmos.

Operation—On May 3, 1903, under ether anesthesia, nearly the whole of the right lobe was removed. Three months subsequent to operation the tremor had disappeared, the patient was much less nervous and the diarrhea and nausea had disappeared.

Pathology—Cyst of thyroid gland. Cyst fluid slightly discolored and thin. Specimen was lost in transit to laboratory, so no microscopic examination was made. Patient was seen Dec 15, 1905, pulse, 88, weight increased seventeen pounds, and says she feels perfectly well.

CASE 3—Mrs H W T, aged 44, was born in Illinois and had lived in Iowa thirty eight years.

History—History of tremor, nervousness, nausea, vomiting, diarrhea, for four years. During the past six months the eyes were noticed to be moderately prominent. The pulse was said to run at times as high as 148. When first seen it was 126 to 134. The thyroid gland was only moderately enlarged, slightly more prominent on the left side.

Operation—On Feb 16, 1904, under cocaine anesthesia, the left lobe and isthmus were removed. Except for the day following the removal, when patient's pulse went to 126, the temperature to 102.8 and there was extreme restlessness, the recovery was uninterrupted.

Pathology—Sections showed typical invaginations of exophthalmic goiter.

FEB 17, 1906

On June 16, 1905, the following was received "Your patient is fine. Her eyes have lost their prominence so much that it is hardly noticeable. She weighs 141 pounds" (weight at time of operation, 118) Her other symptoms have been so relieved that she had not called on the doctor for attention for over three months

CONCLUSIONS

1 Every irregular tumor of the thyroid, no matter how small, should be removed, as only by following this line of procedure can we hope to save the lives of those having malignant growths

2 Every regular tumor of the thyroid causing symptoms other than deformity should be resected when, after a few months' medical treatment, its growth is not checked, and no improvement is shown

3 Avoidance of trauma, care of the stump, free drainage and salt solution to keep full blood and lymph vessels to prevent as far as possible wound absorption

MUCOCELE OF THE APPENDIX

WITH REPORT OF A CASE POSSIBLY CARCINOMATOUS
IN NATURE *

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The somewhat indefinite term mucocoele may be retained because it sufficiently suggests the general characters of a condition, the exact nature of which is probably not always the same. In some cases the pathology seems clear, in others there is much uncertainty as to the process of formation, but in all there is a cyst-like appendix with mucoid contents. Such cysts, and in fact all kinds of cysts, of the appendix are comparatively rare. According to Kelly and Hurdon, Ribbert found six cases among 400 autopsies, Bryant, one case among 124 autopsies, Steiner, three among 2,286, Bordy, one among 528, and they themselves found sixteen cases recorded among 3,770 autopsies at the Boston City Hospital. I have seen but one well-defined case, that here-with reported, among about 2,000 autopsies.

The appearance of the diseased appendix is that of a rounded or pyriform cyst with a more or less definite constriction of the proximal portion of the organ. Sometimes the distal part or tip alone is dilated, in other cases the whole appendix is enlarged. The lumen may be completely occluded at the cecal end or merely narrowed. In some of the cases the obstruction was due to a kink produced by a bend or by a fibrous band. In one, at least (Treves and Swallow), the cyst contents flowed out when the appendix was straightened.

The contents of the cysts are either of a muco-purulent, sero-mucous, serous or purely mucoid character. Occasionally they are blood-tinged. A review of the reported cases will show that in all probability the cysts are of different pathologic character. Some are undoubtedly merely inflammatory retention cysts, caused by occlusion of the mouth or proximal part of the appendix. A number of such have come under my observation, all being of moderate size and quite evidently of inflammatory origin. Exceptional cases, however, may be of such size and may have lost the characters of inflammatory retention cysts to such an extent that they may be classified as cysts and may admit of much doubt as to the mode of formation.

LITERATURE

Leube,¹ in referring to these inflammatory retention cysts, states that the contents at first consist of tenacious mucous, and that later the sac contains only a watery serum, because when the appendix becomes much distended its wall becomes thinned and its vessels more superficial. Thus the watery portion of the blood may escape more easily, and the formation of mucus is reduced to a minimum (*hydrops processus vermiformis*).

Sonnenberg,² in referring to hydrops of the appendix and to retentive cysts, after detailing the results of obstruction of the appendix, states that the retained secretion does not always cause a severe disease of the appendix. If the obstruction occurs at a time when the lumen of the appendix is free, or when virulent microorganisms are not present, there is no decomposition of the secretions. A continued accumulation of secretion takes place and overdistension of the appendix in the form of a retention cyst may occur. The mucous membrane becomes compressed, epithelial cells are thrown off and the connective tissue elements hypertrophy. The muscular and serous coats of the appendix also thicken. Hermost protrusions of the mucous membrane through the muscular layer are occasionally met with, as in the case described by Kelyack and Ribbert. Such protrusions are also found in cases reported by Shoemaker and Kelly and in my own.

Among others the following reports refer to cases supposed to have had this character of retention cysts.

Wenzel-Gruber³ describes a case in which the appendix was 10 cm long, the spherical sac at the top being 4.2 cm long, the constricted neck 1.8 cm. and the pedicle or proximal portion 4 cm in length. The diameter of the sac was 5 cm, of the neck 2 cm and of the pedicle 1 cm. The wall of the sac was from 2 to 3 mm thick, as were the walls of the proximal portion. The serosa was thickened, the muscularis hypertrophied and the mucosa convoluted. The cyst was filled with viscid glassy mucus. The patient had tuberculosis of the lungs and intestines. The author notes that the opening of the appendix into the cecum, 1 mm in diameter, was very small, but must have been thus narrowed by the chronic inflammation.

Féré⁴ presented a mucocoele of the appendix, found at autopsy on a man 55 years of age, dead of disease of the kidneys. The appendix was sigmoid and fusiform, with a circumference of 9 cm at the central dilated portion. The length was 10.5 cm. The appendix was quite free from adhesions and normal in color. On opening the cecum there was seen a fluctuating tumor the size of a walnut, covered with reddish mucous membrane, which was almost ecchymotic in spots. The contents of this tumor were continuous with the contents of the appendix. On section of the unthickened walls of the appendix a colorless gelatinous mass, resembling boiled starch, was turned out. This was found to be composed of mucin and a few cells. The mucocoele was probably consequent on an obliteration of the appendiceal opening, due to ulceration of the mucous membrane at this point. The tumor distended the wall formed by the mucous membrane of the cecum and the appendix, and thus produced the intracecal tumor. The condition had caused no symptoms.

* From the William Pepper Laboratory of Clinical Medicine
Phoebe A. Hearst foundation

1 Ziemssen's Cyclopaedia of the Practice of Med. vol vii p 361

2 Path. u. Therap. der Perityphlitis Leipzig 1904

3 Arch. f. Path. Anat. u. Physiolog., 1875 vol lxi p 97

4 Progres Med. Paris 1877 vol v p 73

Other cases of cysts or of dropsies of the appendix are referred to by Bossard, Kraussold and Ribbert, and Wollfer describes a cyst found in an operation for herniotomy and which, on consideration of its characters, seemed to be a cyst of the appendix.

Bristowe⁵ calls attention to dilatation of the appendix which may occur when its orifice is obliterated or obstructed. "Then the appendix becomes elongated and plump (perhaps as thick as the little finger), presents often false diverticula (resembling, on a small scale, those of a sacculated bladder), and is distended with a glairy transparent fluid, the secretion of the mucous membrane."

Treves⁶ states that it is common to find the fore end of the appendix greatly enlarged and distended from the retention of mucus and other matters in the distal end of the canal.

Kelnack says that this has not been his experience. He refers to one case under his own observation and to Fenwick's case,⁷ in which "the appendix was distended by a milky fluid, the communication with the cecum being obliterated."

Maylard⁸ describes a retention cyst of the vermiform appendix from a patient who had died of chronic Bright's disease. The appendix was free, four inches in length, normal for its proximal two inches, "but the distal portion was dilated into an egg-shaped, tense, cyst-like structure." The dilated part was shut off from proximal portion which communicated freely with the cecum. A mass of clear gelatinous substance was turned out of the cyst, leaving behind some "white, cream-like material, in which was embedded a small calcareous concretion." The peritoneal surface was deeply injected with blood vessels. Maylard notes that Coats⁹ has described a similar specimen.

Shoemaker¹⁰ describes a cystic condition of the appendix, discovered postmortem, not having given rise to symptoms during life. The cyst of the appendix was 4 inches long and 1½ inches in its broadest diameter. "A small portion of the distal end was not dilated, and at about the broadest portion of the cyst was a thinned area seemingly about to rupture." The cyst contained a "clear jelly-like mass."

Biggs¹¹ reports two cases of stricture of the appendix. One appendix was 9 cm long and 2 cm in diameter, and the lumen was occluded 5 cm from the origin by firm fibrous bands. "The contents of the appendix measured 2 drams, were of a slightly pinkish color, and consisted of fat globules, granular matter, and cholesterolin crystals." The second appendix was obstructed by a kink near the tip, produced by traction of the peritoneum.

Hawkins¹² reports 2 cases of a condition which he calls "cystic appendix," which were cases of empyema of the appendix. He thinks these cysts may be caused by obstruction of the lumen due to kinking of the tube by an acute bend. He refers to a case reported by Treves and Swallow¹³ in which the cyst was 2 inches in length, very hard, and filled with mucus, which escaped when the appendix was made straight after its removal. The bent position had been maintained by old adhesions.

It is somewhat remarkable that in almost all the cases the condition was discovered accidentally at operations or autopsy or at least had occasioned no pronounced symptoms. If the accumulating liquid is of inflammatory nature, one might expect, in a greater number of the cases, active clinical symptoms, especially as the cysts often reach considerable size and not rarely have been attached by adhesions to surrounding structures. There is little doubt, however, that most of these cases were probably of inflammatory origin.

In some cases, a tumor was recognized in the right iliac fossa or the growth was of such size as to have made it probably palpable during life.

Coats¹⁴ mentions a case in which the appendix had been converted into a large cyst, measuring 5 inches in its long diameter. The cyst contained a tenacious material and the wall was thick and firm.

Wilks¹⁵ saw a case in which the appendix was dilated to the size of the ileum and distended with 3 or 4 ounces of white odorless mucus.

Wien¹⁶ reports a case of cystic degeneration of the appendix vermiformis, which caused a tumor in the right iliac fossa. There was great swelling along the crest of the ilium, and an opening near the posterior spine of the ilium, from which 3 or 4 ounces of quite clear mucus, occasionally stained with pus, were discharged daily. The discharge was said to look almost exactly like vitreous humor.

Guttmann¹⁷ reports a specimen of enormous hydrops of the appendix, found on section of a woman 70 years old. The vermiform appendix was 14 cm long and 21 cm in circumference, and the opening into the cecum was completely constricted by strong fibrous bands produced by chronic inflammation of this part of the appendix. The secretion of the mucous membrane had become quite watery.

Montgomery¹⁸ describes a cyst of the appendix found in a woman during the operation of panhysterectomy. The cyst was 5½ inches long and 4¾ inches in its largest circumference. The contents were "apparently thin and watery." The cyst was removed.

Deaver's¹⁹ case presented a cystic dilatation of the appendix, the size of a small orange, which was adherent both to the neighboring coils of small intestine and to the right broad ligament. The lumen of the appendix was entirely occluded ¼ of an inch from its cecal end. The contents of the cyst were quite clear and somewhat tenacious. The author says that the mucous membrane is usually smooth and generally greatly atrophied as a consequence of mechanical pressure. There is also marked atrophy of the lymphoid follicles. If the distension be but moderate, it is not uncommon to find the wall much thickened as a result of compensatory hypertrophy of the muscular coats and also of some connective-tissue hyperplasia.

Occasionally, as in a case reported by Fowler,²⁰ there are active symptoms which necessitate operation. In Fowler's case the dilated portion, about the size of a small walnut, was at the distal end. There were no adhesions.

Though accurate studies of the pathology of the appendix have until recently been wanting, and especially in the class of cases above referred to, it is very probable

5 Reynolds's System of Medicine

6 Lancet Feb 9, 1889, p 268

7 "Clinical Lectures," 1889

8 Trans Glasgow Path and Clin Soc. vol iv, 1891-3, p 111

9 "Manual of Pathology," 2d ed., p 753

10 Occident. Med Times, 1892, vol vi, p 387

11 Med Rec, 1893, vol xliii, p 536

12 "Diseases of the Vermiform Appendix," London, 1895

13 Lancet Feb 9, 1889

14 Glasgow Med Jour, 1875, vol viii, p 126

15 Quoted by Fagge, vol ii, p 174

16 Med Rec, 1880, vol i, p 44

17 Deutsch med Wochst, 1891, vol xxii, p 260

18 THE JOURNAL A. M. A., vol xxix, p 174

19 "Treatise on Appendicitis," Philadelphia, 1900

20 "Treatise on Appendicitis," Philadelphia, 1894

that most of the cases cited were retention cysts with inflammatory contents. Every one who has studied series of appendices must have encountered minor grades of cystic distension with contents of mucopurulent character. More advanced stages may cause empyema, and hydrops may occur in the appendix, as in the gall bladder.

There is, however, some reason to believe that there exists a quite different sort of dilatation of the appendix with which the inflammatory form may readily be confused. Long ago (1867) Rokitsky reported four cases which he regarded as instances of colloid cancer and in which the gross appearance was that of cysts of the appendix. Virchow described these cases as colloid degeneration and figures one in his "Krankhafte Geschwulste".

In Rokitsky's series of cases²¹ the appendix was transformed into a thick-walled cyst, varying in size from 2 to 6 cm. in length and from 1 to 2 cm. in diameter. The wall was made up of fibrous tissue, which replaced the coats of the appendix. The inner portion of this capsule was a loose areolar layer, with brownish pigment here and there, and in places it was lamellated. His observations pointed to the fact that this layer might be the remains of an atrophied reticulum. The contents of these appendices consisted of a whitish-yellow gelatinous substance, supported in two cases by a fine reticular network, with small rudimentary blood vessels visible in places. After considerable discussion of the subject, Rokitsky comes to the conclusion that this affection is a colloid-carcinomatous degeneration of the appendix, and that the tension of the mass of gelatinous carcinomatous material causes a dilatation of the walls of the vermiform process, with a consequent transformation into a fibrous capsule.

At the time of Rokitsky's report little was known regarding the occurrence of carcinoma of the appendix, only two cases, those of Merling (1838) and of Prus (1865), having been reported. Recently, however, a considerable number of cases have been recorded, and Kelly and Hurdon tabulate a total of 52, including 2 which were designated endothelioma. They refer to Rokitsky's cases, though erroneously stating that these were not examined histologically.

In 1884, Draper²² reported a case of colloid cancer of the appendix vermiformis. "The upper third or head of the appendix was enlarged and dilated to such a degree that externally it was of the size and shape of a large plum, its cavity, deeply injected, was irregular in its surface, and would admit the little finger. The opening to the intestine from the appendix was also dilated. The thickened wall of this enlargement presented the characteristic appearances of colloid disease." The tumor had caused symptoms and was probably the cause of death.

The features of this case differed somewhat from those usually described. The thickening of the walls of the diseased appendix and the dilation of the cecal opening contrast strongly with the usual conditions.

Vimont²³ reports a case of mucocoele of the appendix, found at the autopsy of a woman who had been operated on for bilateral gelatinous cysts of the ovary, which had ruptured into the peritoneal cavity. The tip of the appendix was found attached to the uterine cornus. The shape of the appendix resembled that of the stomach with the small end attached to the cecum by a

small pedicle. The appendix was 11 cm. long and 12.5 cm. in circumference at the larger extremity. The contents were gelatinous, like boiled starch, and weighed 38 grams. The walls of the appendix were thickened, whitish, and at one place presented two small papillomatous masses. The author asks if this dilatation may not have been due to compression caused by the ovarian cysts.

This case even more definitely establishes the neoplastic nature of certain mucocoeles.

Baillet²⁴ exhibited a cyst of the appendix found during an operation performed to remove a papillomatous ovarian cyst. The orifice of communication with the cecum was occluded. The cyst was found to be made up of mucoid tissue, embedded in which were many large cavities lined with non-ciliated cylindrical epithelium.

PERSONAL CASE

The case which came under my own observation occurred in a woman aged 50, who had had glycosuria for a number of years and finally died of rapidly developed acidosis. I had not seen her during life, but made the postmortem examination, at which the enlarged appendix was discovered.

Autopsy—Performed March 18, 1899.

The body was that of a very large white woman, probably 5 ft. 10 in. in height, and quite fat. Rigor mortis was well developed. On section into the body, the subcutaneous fat was found excessive, being in places as much as an inch and one-half in thickness. The fat itself was of a light yellow color, and the muscles were rather lighter colored than normal. The pleural cavities were free of exudation, and there were no adhesions. The anterior mediastinum was occupied with a considerable excess of fat, so that the heart and pericardium were completely covered. On section into the pericardial sac, a little clear fluid was discovered. The epicardium contained an excessive deposit of fat at the auriculo-ventricular furrow on the right side and over the root of the great vessels, but not much anywhere else. The coronary vessels were distinctly seen as white streaks, the whiteness being due to the fibrous character of the walls of the vessels. The root and larger branches were so sclerotic that when cut transversely and compressed they immediately sprang open from the stiffness of their walls. The heart-muscle was flabby on both sides, and there were some fatty patches here and there. The endocardium was white in places, and there were marked patches of atheroma in the anterior mitral leaflet, as well as in the root of the aorta around the mouths of the coronary vessels and at the edges and floor of the sinuses of Valsalva. The valvular orifices were normal, as were also the leaflets of the aortic and pulmonary valves. The tricuspid leaflets showed slight thickness at the edges.

The lungs were congested at the bases and somewhat edematous, but there was no marked change.

The abdomen contained an immense quantity of fat in the mesentery and omentum. The gastrointestinal tract presented no abnormalities, except in the region of the appendix. The latter was found greatly distended in a somewhat cystic fashion, and at one point a small hernious protrusion of the mucosa, through a defect in the serous and muscular coats, causing a clear vesicular projection of about the size of a grape seed, was discovered. The mouth of the appendix seemed to be occluded, but the bowel was kept unopened for subsequent dissection. The coils of intestines were everywhere more or less matted together by thin, veil-like adhesions, but there were no gross adhesions of any sort.

The liver was much enlarged and compressed by the ribs (Schnurr Leber). On section, its substance was rather flabby, and spots and streaks of light color were discovered. There was evidently some slight sclerosis and also a considerable degree of fatty change.

²¹ Med. Jahrb. Wien 1867 vol. xiii, p. 179.

²² Boston Med. and Surg. Jour. 1884 vol. cx, p. 171.

²³ Bull. Soc. de la Soc. Anat. Paris 1887 vol. lxi, p. 608.

²⁴ Bull. de la Société Anat. de Paris 1891 55 vol. v, lxxv, p. 67.

The pancreas was soft and presented no macroscopic change. The spleen was enlarged, fully twice its normal size, and the capsule was rather hard. The substance was soft and rather light in color, with spots of dark, almost hemorrhagic, appearance. The splenic artery was atheromatous in a high degree, and the splenic vein greatly increased in size. The kidneys were a little enlarged. The cortex was rather wider than normal, and the substance deeply congested. There was no definite visible disease. The suprarenal capsules were normal.

The abdominal aorta and its branches, as far as they could be felt, were sclerotic, though much less so than the splenic artery.

The uterus and its appendages were normal.

Description of Cyst—The appendiceal cyst was found to be about $2\frac{1}{2}$ inches in length and a little over 1 inch in diameter at its thickest part, which was near the middle of the organ. The cyst extended from the cecum to the tip of the appendix. At the cecal attachment the lumen was occluded and the expansion to the cyst was sudden, as if a much enlarged appendix had been constricted at its origin by a tightly drawn encircling ligature. The unopened cyst was quite firm and elastic, giving the impression of a sac tensely distended with gelatinous matter (Fig 1). The wall was white and glistening on the outside, and the small blood vessels showed plainly in the serous covering. On transverse section, the cyst was found to be of semi solid consistence, its walls tough and fibrous, 1 to 2 mm thick, and in most places clearly separated from the whitish or opalescent gelatinous contents (Fig 2). The latter were easily shelled out when the thickness and firmness of the walls prevented their collapse, leaving a firm shell.

Microscopic Examination—Microscopic examination showed the wall or capsule of the cyst to consist of a thickened and fibrous muscularis and serosa (Fig 3). The submucosa was of loose areolar character, containing considerable leucocytic infiltration and new formed spindle cells. The mucosa was nowhere intact. In its place was found a layer of varying thickness composed of polymorphous epithelial cells without definite arrangement. Generally this epithelial lining was thin and in some places wanting, in a few places it was more massive, and at such places there could be traced into the gelatinous cyst contents, irregular extension of columns or strata of epithelial cells.

Cyst Contents—The contents of the cyst were made up of a lamellated gelatinous substance of compact character. Between the lamellae were found cells (leucocytes) and many minute spherical bodies staining deeply with hematoxylin (calcareous spheres, Fig 4), and here and there masses of irregular epithelial cells or less frequently ill defined glandular acini. While the epithelial cells were more numerous near the periphery, that is, just within the capsule, they could be found at the very center and scattered everywhere through the gelatinous substance. There was no evidence of a well developed reticulum, but in places the irregular course of the gelatinous lamellae and the presence of short strands of spindle cells lying end to end suggested an old reticular arrangement. Nearly all the cells within the gelatinous material were degenerate, the groups of epithelial cells in particular.

The appearances strongly indicated some active cellular process with mucoid degeneration rather than an exudation from a diseased, but more or less intact, mucous membrane. The presence of acini deeply embedded in the gelatinous material and of irregular heaps of polymorphous epithelial cells further confirmed the suspicion that the process was akin to that of gelatinous carcinoma elsewhere.

There was no evidence in any of the sections of invasion of the walls of the appendix by a heterotopic epithelial process, though here and there in the submucosa small collections of epithelium like cells could be identified. It is possible that a more extensive sectioning of the appendix might have discovered definite invasion, but at the time when the sections were made no suspicion was entertained of a possible malignant nature of the condition.

It may be recalled that in some of the reported cases, such as that of C C Norris,²⁵ but little invasion of the walls was

evident, the growth appearing, in the main, as a mass within the lumen of the appendix.

Chemical Examination—Chemical examination of the contents of the cyst showed the presence of considerable quantities of calcium which the microscopic examination had indicated. The fact that the mucoid material was a mucoprotein of the same general character as those met in gelatinous tumors of the ovary and the like seems to me of some importance, though not a certain proof of the nature of the condition.

Dr Edsall reported his chemical study of the cyst contents as follows:

"The substance from the interior of the appendix was (after preservation in alcohol) of somewhat the same consistency as a dense jelly. It was of grayish white color, partially opaque. It was soluble in water, forming a slightly glistening solution. On boiling, the solution became opalescent, but did not coagulate. It did not coagulate on the addition of acetic acid. Absolute alcohol produced a precipitate which was still readily soluble in water after standing under alcohol for more than 24 hours. After boiling with 2 per cent sulphuric acid, the substance reduced Fehling's solution readily. The lack of coagulation after adding acetic acid is sufficient to indicate that it was not mucin, the solubility in water distinguished it from colloid. The reactions are those characteristic of pseudomucin. After allowing the preserving alcohol to evaporate from two small portions of the substance, these portions were weighed, incinerated, and the calcium of the ash determined. In the two instances the weight of the calcium (as Ca O) was, respectively, 1.1 per cent and 0.85 per cent of the total."

It must be admitted that the nature of the process in the appendix I have described is somewhat uncertain. At first I was disposed to think it simply a dilated appendix filled with mucoid material unusual in amount and character. Closer study, however, and in particular the discovery of irregular acini, epithelial tubular structures and collections of epithelial cells scattered everywhere through the gelatinous substance made me suspicious that the condition might be allied to colloid carcinoma. A review of the scant literature of the subject and especially the features of the cases reported by Vimont and Baillet seem to lend some support to my suspicion.

DISCUSSION

DR WALTER L. BIERING, Iowa City, Iowa, said that he had seen only one case that bore any resemblance to the interesting condition described by Dr Stengel and this was evidently not identical. An enlarged appendix, obtained at operation, measured $3\frac{1}{2} \times 1\frac{1}{2}$ inches, and resembled a retention cyst, the entire mass having an elliptical form. The content was composed entirely of gelatinous mucoid material, at first it was thought to be purely an evidence of a perverted secretion of the lining epithelium due to chronic inflammation, following which the excessive mucoid substance had become retained in the dilated appendix, but the fact that portions of the mucosa and the other coats of the appendix were replaced and invaded by this same material made it appear, in part at least, like a retrogressive tissue change. Dr Biering said that the question

²⁵ Since the above was written, an interesting specimen has been shown me by Dr A J Smith, to which I am permitted to refer by his and Dr B C Hirst's courtesy. Dr Smith writes as follows:

"Appendix was removed in Howard Hospital in June, 1905, by Dr B C Hirst, from a negro woman, character of case was not appreciated prior to operation. The woman was supposed to have fibroid pelvic growths. At operation both ovaries were found much enlarged and the seat of widely infiltrating papillary adenocarcinoma with surface papillary extensions, with both tubes and peritoneal surface of uterus similarly involved. Appendix was free, short, with smooth and pale and glistening exterior, but with distal extremity distended into a small rounded cyst-like dilatation. On section the latter was found filled with clear mucus, the walls grossly showing no thickening save at one or two points where there were tiny white subserous nodules, which may possibly be foci of starting invasion from the cancerous growth of the genitals. The appearance of the gross specimen was strikingly similar to that of my own."

naturally arises as to whether the original process in the case Dr Stengel reported was not neoplasm, carcinomatous in character, in which the epithelial elements had become completely replaced by the mucoid material. He thought the condition certainly unique, and regarded the name proposed, mucocoele, as distinctive as any that could be suggested.



Fig 1—Slightly reduced view of the cecum (a) and appendix (b). The mesentery of the appendix was heavily loaded with fat (c).

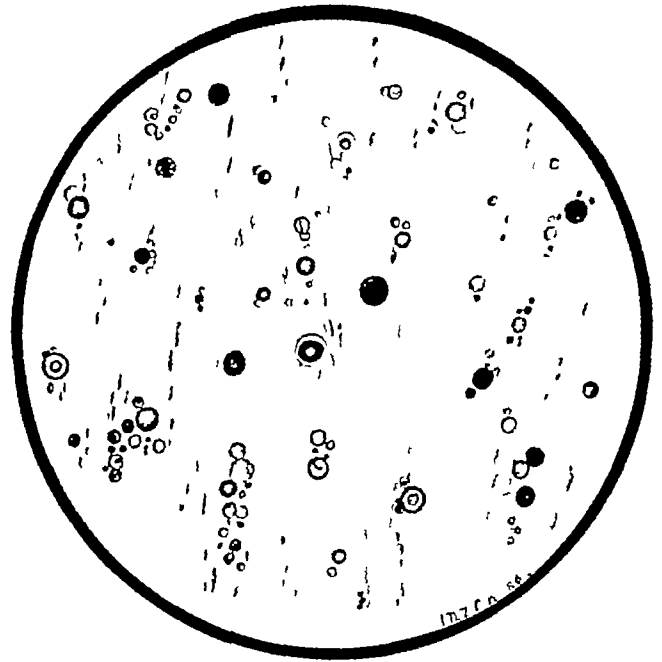


Fig 4—Calcareous spheres imbedded in the gelatinous substance within the appendix. Zeiss. oc. 1, obj 1/12. Specimen stained with hematoxylin.



Fig 3—Section of the wall of the appendix and part of the substance within. Toward the center of the appendix is seen (a) an acinous or section of a glandular tubule; at (b) an irregular mass of epithelial cells suggesting by its position and the relations of adjacent structures that it had been separated from the mucosa. No remains of normal mucous membrane are observable.

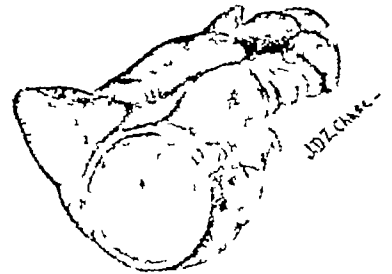


Fig 2.—Transverse section of the appendix showing the stiff walls and opalescent mucoid contents. Life size.

The Value of Brief, Pointed Practical Articles—Dr George J. Monroe said in the *Cincinnati Lancet Clinic* about a paper which he wrote. I am not gifted with a large vocabulary of words, yet on reading the first paper I prepared I found that it took me fifty-four minutes to read it. I had not then said all I wanted to. I began to eliminate and condense. I rewrote the paper. I found that it took thirty-two minutes to read this paper. Again I rewrote the paper, and on reading it this time I found that it only required nineteen minutes. I compared this paper with the first and second, and I was surprised to find that I had really said more than I had in either of them. This will apply to the majority of papers read before medical associations. The greater number of them

could be materially condensed and yet contain all that is expressed in the long papers. How many papers we find that are filled with useless matter that has no relation to the subject. What cares the busy doctor about a lot of statistics and data (that have been published elsewhere and that can be looked up by anyone interested)? We want to learn the best way to diagnose and treat these diseased conditions.

PLEXIFORM NEUROFIBROMA

FRANK B WYNN, MD
INDIANAPOLIS

The plexiform type of neurofibroma is considered by Recklinghausen, Kyrleis, Kriege, Hurthle, Teichert, Westphalen and others to arise invariably from the connective tissue of nerve trunks. In opposition to this view, Lahmann maintains that such neoplasms may not only originate in the connective tissue of the nerve trunks, but also from that of the blood vessels or of the skin glands or hair follicles as well. His findings have been corroborated in whole or in part by Philippson, Du Mesnil, Verneuil and Lowenstein. Bearing on this mooted question the following case may present some features of interest.

Family and Personal History—R. L., the unfortunate subject of this report (Fig 1), is aged 19 years. His parents,

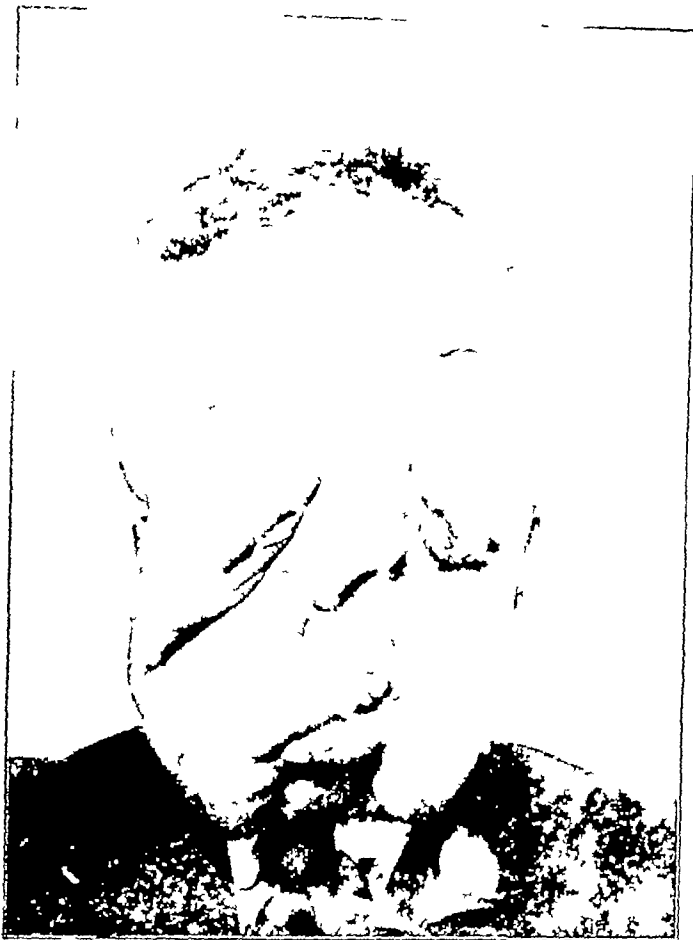


Fig 1—Photograph of the patient

five brothers and two sisters are living and healthy. There is no hereditary taint. His training in an institute for the blind was thorough, and, all things considered, he is exceptionally bright and well formed. He has never suffered from any malady except the one described.

History of Case—Undue prominence of the eyeballs was noted at birth. Almost at once there developed a catarrhal conjunctivitis, accompanied by extreme photophobia. Later keratitis arose, followed by ulceration of the cornea with subsequent fibrosis. From all that can be learned blindness must have supervened at a very early age.

Swelling of the eyelids, especially the upper, was an early manifestation, as indicated in a photograph taken at 2 years of age. At 8 the eyes were closed. Three years later (1897) the bulging and bagging of the upper lids became so great that surgical measures were instituted. A large section of the redundant skin was removed with a lemon sized mass of neoplastic tissue from either orbit. Gradual recurrence of the growth followed the operation.

* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session July, 1905.



Fig 2—Plexiform Neurofibroma Showing arrangement of five cords around the large vessel (×12)

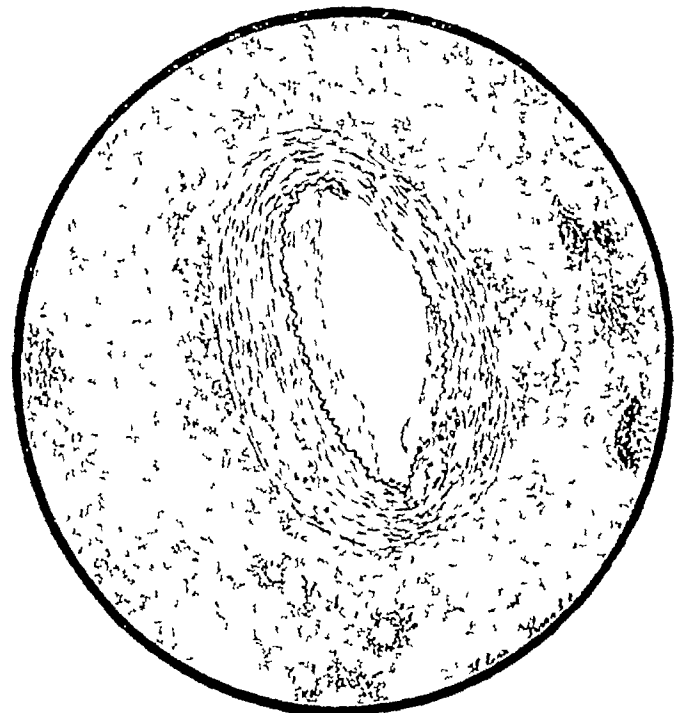


Fig 4—Large vessel in which is shown a nodular arteriosclerosis



Fig 3—Showing arrangement of four cords about a large vessel (x5)

About the fourth year of age tenderness was first noted over the right temporo parietal region and at a point midway between the mastoid prominence and the occipital protuberance. In these respective regions there slowly developed a dense, diffuse enlargement, to which the skin soon became attached. Within the past eight years growths precisely similar in size and location have appeared on the left side of the head.

A few years following the appearance of the growths in the orbits and on the skull, irregular, easily movable masses developed in the subcutaneous tissue of the right and then of the left cheek. Extension took place over the angle of the right jaw into the parotid region. More or less tenderness has characterized the growths wherever found.

Status Præsens—Weight 98 pounds, height 5 feet 1 inch. The bones are small, trunk and extremities delicately shaped. Sensorium clear. Deficiency of musculature and adipose tissue. Examination of the nervous system and of the thoracic and abdominal viscera gives negative findings. There is some pallor of the skin. A blood examination gives hemoglobin, 78 per

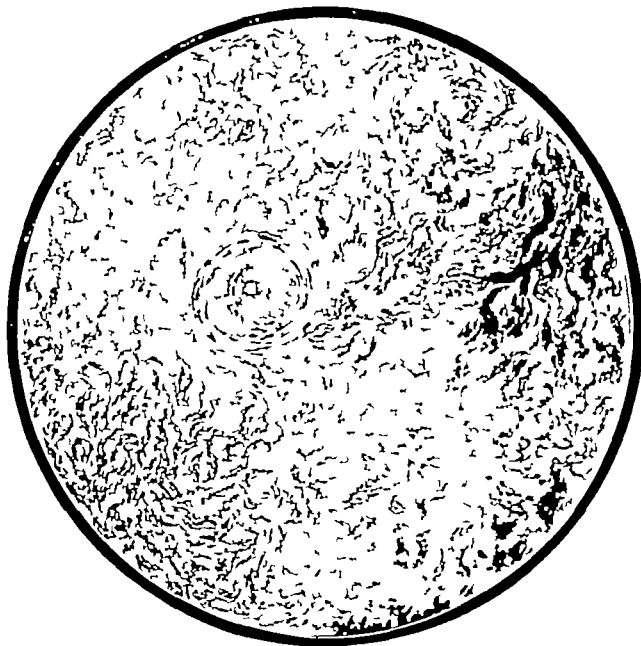


Fig 6—Showing fibrous structure of growth and small vessel in which there is extensive subendothelial proliferation

cent., red cells, 4,470,000, leucocytes, 10,400. The striking thing on inspection is the gigantic head on a dwarfed body. The measurements of the head are: Circumference, 26 inches, anteroposterior diameter, $9\frac{1}{2}$ inches, transverse diameter through temporal region, $8\frac{1}{4}$ inches.

Over each temporo parietal region and extending slightly on to the forehead are palm sized enlargements intimately con-

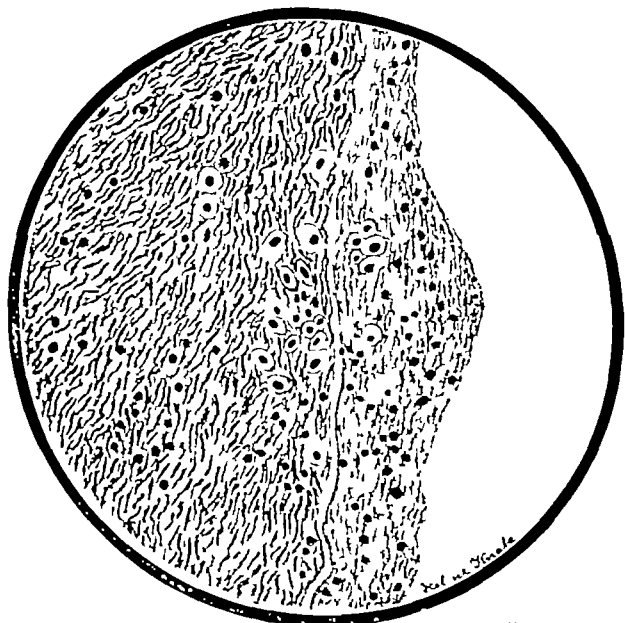


Fig 5—Same as Fig 4 under high power showing degenerative change in intima and media.

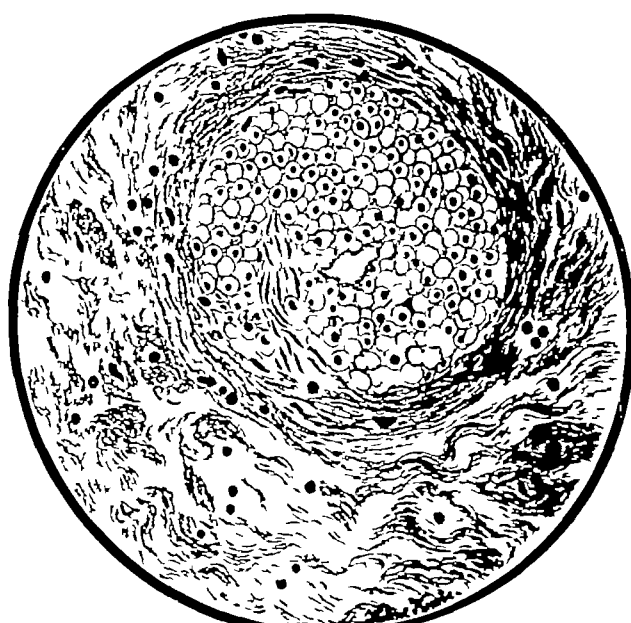


Fig 7—High power enlargement of vessel shown in Fig 6 showing subendothelial proliferation.

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nected with or a part of the bones. Just posterior and superior to the mastoid prominence on the right side is an egg sized enlargement of similar nature. All these growths on the skull are characterized by tenderness, bonelike hardness and firm attachment of the overlying skin. The skin over these localities and in fact wherever adherent to the underlying growth,

easily palpable, fill the orbital cavities. Similar flatter masses of hard convoluted cords are felt, freely movable in pendulous folds hanging from either cheek.

Histologic Study—The patient consented to an exploratory incision for the purpose of removing one of these masses for microscopic study and diagnosis. Through a two inch incision

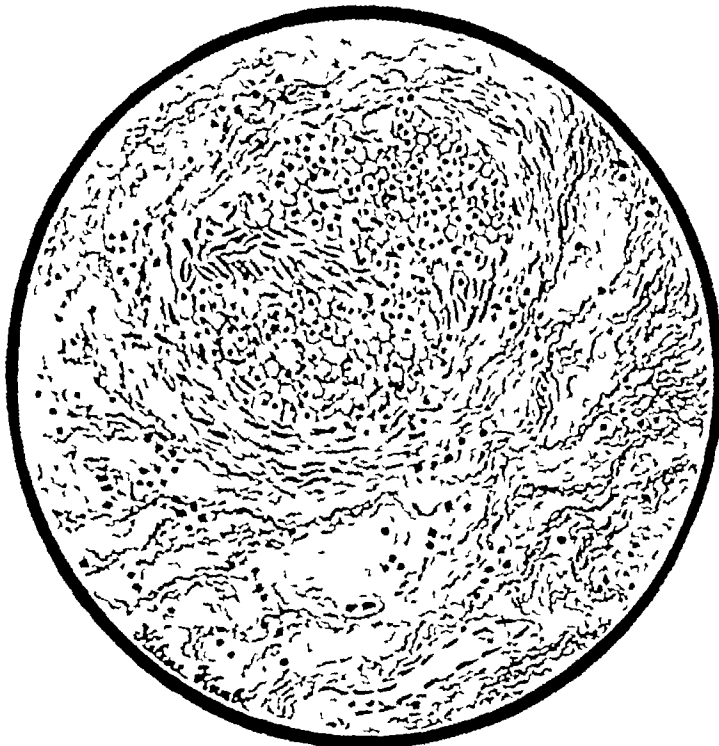


Fig. 8—Showing two vessels with extensive subendothelial proliferation red cells seen in one lumen smooth muscle cells

shows brownish, mottled pigmentation. Having the same distribution as the pigmentation are permut to hazelnut sized areas of epidermal thickening, resembling sebaceous warts.

The skin of the face hangs in great lobulated folds over the lower jaw and from the orbits on either side (dermatolysis). The lips are enormously thickened. The lower eyelids are

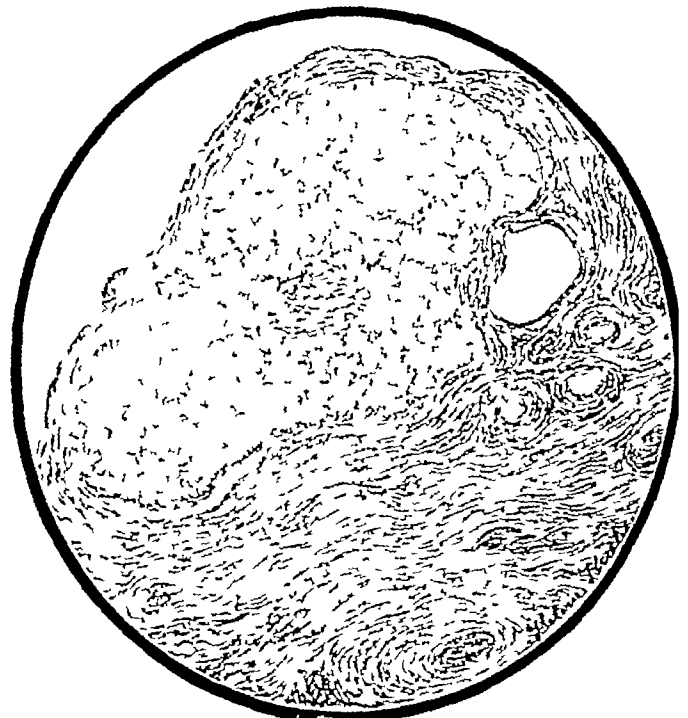


Fig. 10—Low power showing transverse section of small cord which is an area of smooth muscle fibers

tortuous white cords from two to six millimeters in diameter were plainly visible. The resemblance to sclerotic vessels was very striking. The strands were of uniform thickness (no beaded) and loosely imbedded in the subcutaneous areolar tissue. An interesting fact is their arrangement in groups of from two to five strands, parallel and surrounding a large ar



Fig. 9—High power showing fibrillae in central portion of cords

verted and coarsely granular. No ocular structure is visible on the right, but on the left at the inner canthus the remnant of an eyeball is seen, which shows a densely sclerotic cornea and is capable of slight movement. Both eyeballs may be palpated as very hard and reduced in size. Firm fibrous adhesions bind the palpebral conjunction to underlying structures, except at the border of the lids. Irregular, hard, wormlike masses,

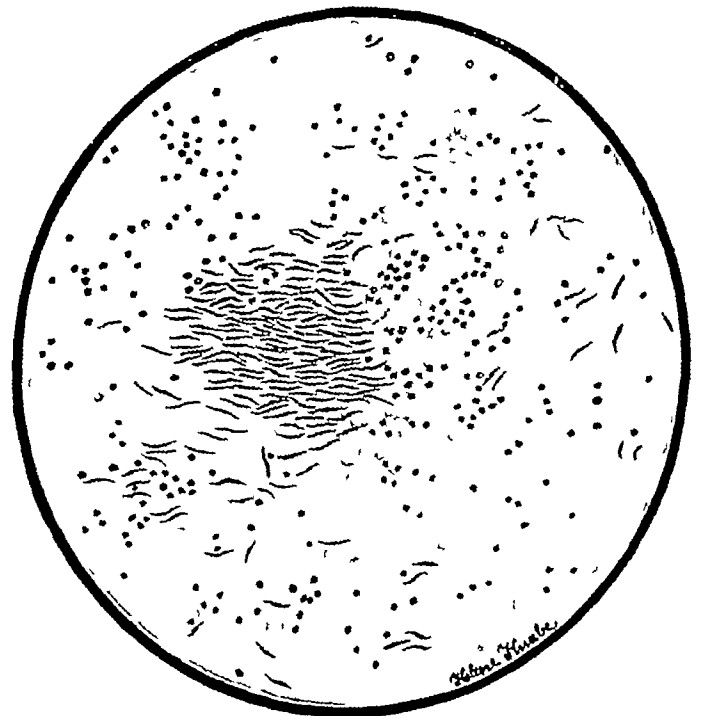


Fig. 11—High power of Fig. 10 showing the nonstriated muscle cells

tery (Fig. 2). On cross section these cords presented a light, translucent, almost transparent appearance.

Microscopic study reveals several features of interest.

1. The predominant histologic structure of these cords (Figs 9 and 10) is a dense fibrous periphery with a central meshwork of fine fibrillae, in which there is a sparse distribution of

nuclei, round and spindle shaped. The arrangement suggests a resemblance to perineural connective tissue surrounding a nerve bundle in which there has been proliferation of the endoneurium with degeneration of the nerve fibers. Staining with polychrome methyl blue fails to give the reaction for mastzellen. Unna considers the presence of the latter cells as highly characteristic of neurofibroma.

2 After staining by the Weigert method, careful search has failed to reveal any nerve fibers.

3 Vascular changes. The large arteries (Fig 4) show nodular arteriosclerosis with thickening of the intima and some degenerative change in the media. More interesting are the changes in some of the medium sized smaller vessels. By extensive subendothelial proliferation a wide zone of large cells is formed, surrounded by a rim of fibroblastic connective tissue, mixed in some instances with smooth muscle fibers (Figs 6 and 7).

Examined in cross section under a low power, the first impression produced is of a nerve bundle surrounded by its perineurium. But close study reveals a central lumen with endothelial lining in all the various areas of this character, showing the vascular nature. If the contention of Lahmann and others that the so called neurofibroma may sometimes arise from the connective tissues of blood vessels is correct, may it not be possible that the lesions as described above represent an early period in the evolution of the growth?

4 Another histologic factor of interest revealed in the study of the specimen is the presence of non striped muscular tissue within the fibrous cords.

DIAGNOSIS

In its clinical aspects the case described seems to be one of plexiform neurofibroma, that is, a new growth arising from the connective tissue of a nerve trunk. Studied pathologically, this is not proved, although it is possible that such complete degeneration of the nerve fibers may have occurred that histologic origin may be difficult to trace. On the other hand, the contention of Lahmann and others that these growths may arise from vascular structures is supported by the following findings in the case:

- (a) An absence of nerve fibers and of mast cells
- (b) The arrangement of the strands parallel to and surrounding the arteries
- (c) Extensive proliferation about the smaller vessels
- (d) The presence of smooth muscle tissue in the tortuous cords which constitute the chief gross pathologic feature of the neoplasm

ETIOLOGY AND PREVENTIVE TREATMENT OF SCARLATINAL NEPHRITIS *

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PHILADELPHIA.

In presenting a paper on the etiology and prevention of scarlatinal nephritis, it is not my purpose to attempt any addition to our knowledge, but rather to emphasize the importance of already-known facts. In striving to control any morbid process, that system of therapeutics should be regarded as best which attempts the destruction of etiologic factors or seeks to mitigate their malignant influences on the economy. In dealing with the acute infectious diseases the greatest advances have been made along the line of prevention.

This fact has received special emphasis in those diseases in which the habits of the several specific germs and their means of transmission have been carefully

studied. This has been notably illustrated in tuberculosis, diphtheria, malaria and, more recently, in yellow fever. Many diseases are rightly regarded as specific even in the absence of evidence sufficient to demonstrate any special organism as the active agent. Among diseases of this character scarlet fever stands pre-eminent. These diseases are best prevented by applying to them the same principles of isolation, disinfection and quarantine which are of value in preventing those maladies which are known to be specific. After the inception of such a disease, in the present state of our knowledge, our province is not to attempt to abort or to cure, but to recognize the possible complications and sequelæ in order that we may either prevent them or mitigate their severity. With respect to scarlatina this is especially true. The disease is self-limited and entirely uninfluenced by drugs. The formerly much-vaunted specifics, sodium benzoate, sodium salicylate, belladonna, etc., have been justly discarded as such. The greatest mortality and morbidity of scarlet fever must be accredited to its complications and sequelæ, which are more far-reaching and produce more human wrecks than those of any of the acute infectious exanthemata.

SCARLATINA AND NEPHRITIS

Not the least interesting of these complications and sequelæ is nephritis. As humanitarians, as well as physicians, it becomes our function to note carefully the etiologic factors concerned in the production of this serious ailment in an attempt to apply such knowledge to its prevention.

The types of this affection are exceedingly variable. From a careful study of the urine it may be learned that, in the beginning, there occurs a form of albuminuria, sometimes associated with a few hyaline casts and epithelial scales, which is more or less common to the initial febrile stage of nearly all the acute infectious diseases. Then there is noted the acutely septic form of kidney disease which occurs as a complication in the very malignant cases which are rapidly fatal. So rapid is the course that suppression of urine and death from uremia occur here often without edema. This type of nephritis is perhaps best described as a part of a universal sepsis, the toxin of which spends its greatest force on the renal tissue. Occurring in varying degrees of severity we have also that well-known form of renal involvement which makes its appearance during the third and fourth week of the disease or after convalescence has been established. This is the so-called post-scarlatinal nephritis, and occurs with a more or less insidious onset, and unless detected early, may lead to serious chronic kidney disease. There is also met what may be designated recurrent intermittent post-scarlatinal albuminuria. This form has received little if any attention at the hands of medical writers, and yet its existence must have been noted by those who have had a greater clinical experience than I. This form of albuminuria occurs in many of those cases which have suffered from even a mild post-scarlatinal nephritis. It is influenced greatly by exercise and diet. Excesses in both these factors act as excitants of an attack, while a reduction in both is universally preventive and curative. The condition, in my limited experience at least, is compatible with apparently robust health. I have noted it at least two years after an attack of scarlet fever. I have not been able to detect tube casts associated with it.

ETIOLOGIC FACTORS

Scarlatina is a disease peculiarly suited to the occurrence of nephritis. During an attack of this disease,

* I read before the Northern Medical Association Oct 27 1905

covering a period of from four to eight weeks, perhaps, there is, during the first half of this time, at least, almost complete destruction of skin function. In this manner the disease is not entirely unlike a severe burn of the first degree both in appearance and in its effect on kidney substance. The kidney, already overworked and overirritated, is thus forced to compensate for this loss of skin function.

Other important etiologic factors may be found in the increased toxicity and the increased acidity of the urine. Of the two the former is by far the more important. Whatever the real poison of scarlet fever may be without doubt it is removed from the economy via the urine, and, unfortunately, it seems to possess a peculiarly irritant effect on the kidney. This statement receives color from the fact that from apparently the mildest attack of scarlet fever may follow the most serious and persistent attack of nephritis. In fact, J. Lewis Smith records a case in which a mother, previously known to be healthy, while nursing her son who was suffering from scarlet fever complained of symptoms which led to a urinary examination which revealed albumin and casts. Smith regards this as a case in which the nephritis was the only symptom, and cites it as an example of the severely irritating effect of the scarlatinal poison on the kidney. The patient in this instance made a perfect recovery. The frequency and seriousness of kidney irritation has received emphasis from the work of Sorensen, who has demonstrated post-mortem renal lesions in patients who exhibited no clinical features of the disease. This statement seems to prove that the irritant is local and produces the morbid changes early. In order to be local it must be in solution in the urine. J. Lewis Smith also cites¹ the cases of four girls in the same family who suffered from desquamative nephritis, after only one of the four had had scarlet fever.

The increased acidity of the urine can be readily determined by analysis. While not such a potent factor, its influence as a producer of kidney irritation can be readily assumed. It is probably the cause of the early albuminuria and, unless permitted to continue, does not cause serious degenerative changes in the renal tissue. The recognition of this fact has an important bearing on our efforts to prevent this affection. The relationship between the concentration of the urine and its acidity is a positive one, and therefore it, too, becomes an important etiologic factor.

Constipation, by preventing the escape of morbid material via the intestinal tract, thereby permits an increase of the toxins in an already overloaded urine. In this manner it may assume the rôle of an important contributory agent. The same may be said of diet. Dietary indiscretion may be nominated as the most important of any one single causal factor. This is especially true when highly organized proteid substances, such as meats, are too early added. These substances act by increasing the toxicity and the acidity of the urine.

The influence of cold can not be entirely disregarded. Its place, however, as a cause of scarlatinal nephritis has not been fully defined. In discussing this point Tyson remarks that "children have been found barefoot in the street with the eruption on them, and yet have escaped Bright's disease." In detailing the prophylaxis of the latter, the same author, however, proceeds thus: "Whatever may be the immediate cause of the renal involvement, it is certain that cold often becomes its exciting cause." Jacobi affirms that "exposure and sudden changes of temperature will always hold their place in

etiology, in the minds of those who do not forget to notice the living case besides the microscopic excrement." My own belief is that it is a factor of much importance in susceptible and anemic cases. The greatest danger lies in a poorly-regulated room temperature, sudden draughts and sudden chilling of the surface by careless bathing. By these means the blood is rapidly driven from the surface capillaries and intense congestion of the internal viscera results.

PREVENTIVE TREATMENT

The patient should be placed in a well-ventilated room, the temperature of which should be about 68 to 70 degrees, and should be kept uniformly even. If possible, a room of southern exposure is to be selected. Draughts and sudden changes of temperature are to be avoided.

Diet—A careful regulation of the diet is essential to the prevention of nephritis. The best diet for scarlet-fever patients is milk. It may be given modified to suit the age if the patient be a healthy bottle-fed baby. If a nursing, maternal milk should constitute the sole source of nutriment. The milk is to be secured with a breast pump. Older children may be given whole milk or milk diluted with a cereal water, lime water or Vichy. If digestion be weak the milk is best exhibited peptonized. However given, milk should be practically the sole article of diet for a period covering from four to six weeks or until desquamation is complete. Experience bears out the observation of Jaccoud that an absolute milk diet is of great service in preventing nephritis. Fruit juices serve a useful purpose by rendering the urine alkaline, and they are very refreshing. Toward the end of the period of desquamation freshly cooked tender vegetables, fruits and farinaceous substances may be cautiously added. Proteids may now be carefully given and only in small quantities. These are gradually increased in quantity and quality as tolerance is established. Throughout the course of scarlet fever, from the beginning, and, especially following each change in diet, the urine should be submitted to a careful daily analysis. On the appearance of the least trace of albumin a return to an absolute milk diet must be made at once.

Hydrotherapy—Asked to designate any one single remedy which is of the greatest service in preventing scarlatinal nephritis, I should unhesitatingly name water. Its free and continuous use is indicated for the reason that, by increasing the amount of urine, it dilutes toxins and diminishes the acidity, thereby lessening kidney irritation. By stimulating catharsis and diaphoresis the elimination of toxins is facilitated. Water can be employed with advantage in three different ways: by mouth, balneotherapy and by enteroclysis, a combination of all these methods being productive of the best results. It is my practice to order a definite amount of water to be given with as much regularity as the food. It is best given between feedings. If plain water can not be readily taken use may be made of the various mineral waters as Poland or Celsin's Vichy, or, better yet, it may be exhibited as lemonade or orangeade. To a pint of either of the last two may be added, with advantage, a teaspoonful of cream of tartar.

A daily bath, given with friction, is a valuable adjunct. Aside from being the only means to be employed to reduce temperature, it increases the capillary circulation of the skin and thus relieves internal congestion. The bath must be given carefully, otherwise serious chilling of the surface will ensue and the purpose for which it was employed will be defeated. For this reason the full

¹ From the *British Medical Journal* Nov. 20, 1879

tub bath is best, the child enveloped in a blanket being completely immersed. A dry blanket is warmed and held ready to receive the patient when the bath is completed. This is followed by free diaphoresis. If the full tub bath can not be used, it may be replaced by sponging, care being taken to sponge only one part of the body at a time, while the rest of the surface is kept covered. The temperature of the water is regulated by the temperature of the patient. It should never be more than five or ten degrees lower. For young children and infants the warm bath is always desirable. Its effect on temperature is often amazing and the diaphoretic effect is always beneficial.

Enteroclysis is a valuable prophylactic agent. From one to eight ounces of normal saline solution should be thrown into the rectum to be retained once or twice a day. It lessens thirst, reduces fever, prevents constipation, lessens toxemia and allays renal irritation.

Medicinal.—The only drugs which are of any value in preventing renal complications are alkalis and laxatives. Urinary antiseptics possess little if any controlling influence. The administration of urotropin is useless and expensive. The salts of the organic acids as the citrate or acetate of potassium are changed to alkaline carbonates in the blood and are eliminated as such in the urine. They thus overcome the acidity of the urine, thereby destroying an etiologic factor of some importance. They are given in the dose of five to ten grains. From the beginning of the attack and throughout the course of the disease minute doses of calomel should be given at intervals of every three or four days. These are best followed by broken doses of magnesium sulphate conveniently dispensed as follows:

R. Magnesi sulphatis	gr	v x	3 6
Ac. acetici diluti	m	v	3
Syr. zingiberis	m	xx	2
Aque dest q s ad	℥i		30

M. Sig. A teaspoonful every two or three hours in water.

Antitoxin.—As noted before, the specific organism of scarlet fever has not been determined. Of all the organisms found the streptococcus seems to be the one most often present. It is nearly always present in the discharge from an otitis media, and has been recovered from the renal tissue. For these reasons it is regarded by some authors as the primal cause of the complications. This view is accepted by Charlton, who, however, regards the presence of the streptococcus as the result of a secondary infection. For this reason he employs Moser's antistreptococcic serum early in the treatment of scarlet fever. Escherich and E. von Leyden comment favorably on the use of this serum for the control of the general symptoms, but assert that it does not influence the occurrence of complications. Moser himself believes that his serum has a beneficial influence on the grave forms of scarlatina but that it does not prevent nephritis.

Pernicious Anemia.—Menetrier, Aubertin and Bloch report a case of essential pernicious anemia in which by feeding with red marrow and attention to general nutrition the number of red corpuscles increased from 680,000 to 3,000,000 in a short time. They conclude that in every case of grave cryptogenetic anemia, when there is a myeloid reaction, however feeble, it is advisable to try medullary opotherapy. In certain rare cases where the myeloid reaction is marked this treatment by reinforcing and regulating the efforts of the organism itself may cause an increase of the blood globules and at least a temporary cure. Where there is total absence of myeloid reaction this treatment is absolutely without effect.

Special Article

THE PHARMACOPEIA AND THE PHYSICIAN*

SALINE CATHARTICS

CHAPTER VIII

A salt may be defined as a substance resulting from the chemic union of an acid with a base. For the present purpose we shall exclude from this classification salts of alkaloids and of other organic bases, and confine our definition to the popular conception of salts, or purgative salts.

The purgative salts, in contrast to the antiquity of many of the vegetable cathartics, are of but comparatively modern use, many of the inorganic salts being introduced into Europe by the Moors, but not coming into general use until after the time of Paracelsus.

Most of the purgative salts have a disagreeable, bitter taste, but when taken in an effervescent draught this bitterness is masked, and the effervescent salts have therefore come into great popularity. The widespread use of nostrums of this type, instead of the official effervescent salts prepared by the pharmacist, illustrates an unfortunate condition which exists without a sufficient reason. There is too much distrust of the pharmacist by certain physicians, who complain that pharmacists are unable to supply preparations equal to those of the nostrum maker. This may possibly be true in isolated cases, but the proof to the contrary is furnished by the extreme simplicity of the preparation of the effervescent salts which the average pharmacist can prepare quite as well as the large manufacturer. Nevertheless the proprietaries of this class have an enormous sale.

It is unfortunately true that the physician often lacks confidence in himself and prefers to use the ready-made mixture rather than to exercise his own choice. This is degrading alike to medicine and to pharmacy.

It is a part of our present purpose to illustrate the ease with which the physician may choose his own agents in the proportion which seems best adapted to each individual case, with the assurance that any honest pharmacist can compound his prescription in a form equal in efficiency and elegance to the nostrums.

The preparation of the effervescent salts depends on the fact that tartaric and citric acids and sodium bicarbonate may be kept in contact without change when dry, but unite with effervescence when they are dissolved in water.

As an example of the ease with which effervescent salts are prepared, we give directions for making one, which, though extremely simple, is still the most complex of those which are official. The Effervescent Magnesium Sulphate. The same directions, with slight modifications, are used in preparing the other official granular effervescent salts and may be used when it is desired to include other salts or even caffeine and similar substances.

The magnesium sulphate is dried over a water bath, powdered and mixed with powdered citric and tartaric acids, then with the sodium bicarbonate, the mixture is heated to about 95° C in a dish placed in an oven until it becomes moist, it is then rubbed through an ordinary tinned iron sieve (which forms it into granules). These are then dried at a temperature of 54° C.

Does it seem credible that any pharmacist is unable to make so simple a preparation as that?

Many of the nostrums that are offered to physicians as effervescent saline mixtures are not even granulated, and some of them, at least, depend entirely on the use of the cheaper tartaric acid and sodium bicarbonate to produce effervescence. Mixtures of this kind can be prepared extemporaneously quite

* We have received letters calling attention to an apparent discrepancy in the dosage of codein as given in Chapter II of this article, Dec. 23, 1905, p. 1853 and in Chapter III, Jan. 18, 1906, p. 118. In Chapter II, the dose is given as 1/20 of a grain and in Chapter III it is given as 1/4 grain. In the first instance referred to it was the intention to give the dose of codein as 3 mg (1/20 grain) when the drug is used as a sedative in expectorant mixtures. The average dose of course is generally double that of morphin or 30 mg (1/2 grain).

as readily as the frequently prescribed liquid preparations, and we shall give several typical prescriptions in connection with the descriptions of the various salts.

Constipation is by far the most common complaint of those who live in cities. While the rational treatment consists in attention to the diet and other hygienic measures, for the most part it is so much easier to read one of the innumerable advertisements which depict the terrible consequences of constipation and the one certain means of escape therefrom, that the credulous are inclined to accept such statements as true, and in a way, lionize themselves because of the dangers they have encountered and escaped.

Any attempt merely to enumerate the financially successful nostrums of this type involves one in immediate difficulties, because of the enormous number of those advertised to the public, while those of this type advertised to physicians are scarcely less numerous.

The principal purgative salts and their indications are so well known that we shall confine ourselves mainly to enumerating some of them with suggestions for the forms in which they are available and a few of the combinations which may be found useful. We shall have occasion to contrast the well-known actions of these drugs with the absurd claims made for some of the nostrums which they compose.

MAGNESII SULPHAS—U S—Epsom Salt (by which name it is most widely known) is so called because it was obtained by evaporating the water of Epsom Springs. It is one of the chief constituents in many famous purgative waters such, for instance as the Hunyadi of Hungary.

Average dose 15 gm (4 drams)

MAGNESII SULPHAS EFFERVESCENS—U S—(Its preparation has been detailed.)

Average dose 15 gm (4 drams)

MAGNESII CARBONAS—U S—A bulky, white, odorless and nearly tasteless powder, which is insoluble in ordinary solvents.

Average dose 3 gm (45 grains)

MAGNESII OXIDUM—U S—This, commonly called magnesia, or calcined magnesia, closely resembles the carbonate in its several properties.

Average dose 2 gm (30 grains)

MAGNESII OXIDUM PONDROSUM—U S—This differs from the preceding only in being more dense and therefore requiring a less bulky dose. It was originally known as Husband's magnesia.

Average dose 2 gm (30 grains)

LIQUOR MAGNESII CITRATIS—U S—This, almost always called "citrate of magnesia," is one of the most agreeable of the purgative preparations, but it does not keep well, and should therefore be ordered freshly prepared.

Average dose (as purgative) 360 cc (one bottle)

Magnesium carbonate is frequently employed as an antacid, the oxids, light and heavy, are antacid and laxative. The oxids should be given with a large excess of water. They are much used for children.

POTASSII ET SODII TARTRAS—U S—This is commonly called Rochelle salt because it was first manufactured in the city of Rochelle. It was discovered by a pharmacist named Seignette and is often called Seignette salt by the French.

Average dose 8 gm (120 grains)

PURVIS EFFERVESCENS COMPOSITUS—U S—Seidlitz powder is the form in which Rochelle salt is most often used.

SODII PHOSPHAS—U S—This has come into very general use of late years in the treatment of chronic constipation, and it is popularly believed to exert a special influence on the liver. It is soluble in about six parts of water.

Average dose 2 gm (30 grains)

SODII PHOSPHAS EFFERVESCENS—U S—This is much more pleasant to take than the ordinary sodium phosphate, of which it contains 20 per cent.

Average dose 8 gm (120 grains)

SODII PHOSPHAS EXSICCATUS—U S

Average dose 1 gm (15 grains)

A preparation so well known as sodium phosphate requires little therapeutic notice but we wish to offer some suggestions as to the forms in which it is available.

The effervescent salt leaves little to be desired when one wishes to employ it as a laxative, but it is not well adapted to use with hot water.

We give below several examples of its combinations. In some of these lithium citrate is used. Of course, these may be endlessly varied, using the dried magnesium sulphate, for instance, instead of the dried sodium phosphate.

Caffein is often given with effervescing salts, and this or other similar substances may be incorporated without materially changing the formulas.

R Lithii citratis	3i	5 0
Sodii phosph	3viii	30 0
Sodii bicarb	3x	40 0
Acidi tartarici	3vi	25 0

The dose of this is about 4 gms (60 grains)

For use with hot water the following extemporaneously-prepared mixture is preferable to the official effervescent salt.

R Potassii bitart	3x	40 0
Sodii bicarb	3v	20 0
Sodii phosph exsic	3x	40 0

The dose of this preparation is the same as that of the one preceding it. In case a more alkaline mixture is desired the amount of sodium bicarbonate may be slightly increased and the potassium bitartrate correspondingly decreased.

LIQUOR SODII PHOSPHATIS COMPOSITUS—U S—This represents 100 per cent of sodium phosphate.

Average dose 8 cc (2 fluidrachms)

To make this solution, the Pharmacopeia directs that 100 gms of sodium phosphate and 4 gms of sodium nitrate be triturated together in a mortar with 13 gms of citric acid, until completely liquefied, then sufficient water is to be added to make the product measure 100 cc.

Although this requires no more skill than the weighing of the salts, the Alta Chemical Company pretends that it thus secures "An Ideal Nerve Tonic, Laxative, Analgesic! Stimulant of Glandular Function, adjuvant to all organic remedies indicated in the organism! relieving Hepatic Congestion, supporting Sexual Power, regulating both excretion and secretion on a normal physiologic basis!"

The indications enumerated are far too absurd to repeat, but as an example of this word waste we quote the following "Especially reliable as a painless cure for the Morphin Habit!" Does this insolent company suppose that we are bereft of every vestige of intelligence when it insists on telling us such manifest falsehoods as we have quoted, or that Rheumaggon, consisting of sodium iodid and sodium phosphate, is "a specific in all cachectic disorders!"

Surely, Baron Munchausen, in his wildest flights of fancy, never imagined anything more preposterously absurd.

When we see how simple is the preparation of the various effervescent salts, and remember that the Pharmacopeia provides reasonably high standards and readily applied tests for the purity of all official salts, with which all reputable manufacturers of chemicals comply, we see how absurd is the pretense of the nostrum makers that they have special processes and peculiar facilities for manufacturing products of superior quality.

LITHII CARBONAS—U S—It is more than sixty years since Lipowitz announced that this salt favored the solution of uric acid. Since then the lithium salts have been widely used, especially in combination with purgatives and diuretics, but there is no evidence that any benefits result from such combinations.

The lithium salts are of comparatively little importance according to the accepted authorities in therapeutics of to-day.

Average dose 0.5 gm (8 grains)

LITHIUM CITRATUM—U S—Is used for the same purposes and in the same dose as the carbonate.

LITHII CITRAS EFFERVESCENS—U S—Is a convenient form for administering the citrate.

Average dose 8 gm (120 grains)

Lithium salicylate was made official in 1880 because of its asserted superiority in the treatment of acute rheumatism, it possesses no advantages over the other salicylates, but the nostrum makers having seized on it while the first reports of its successful use were being circulated, they continue to make the

most extravagant claims for it in their preparations. Cushny specifically denies that the salt has any especial solvent action on uric acid in acute rheumatism, this should be borne in mind when free circular pharmacology is under consideration.

Sal lithin is typical of a host of nostrums which consist of lithium and purgative salts. It is made by the firm which exploits the thoroughly discredited bioplasm by such absurd misstatements and reprehensible methods. (See *THE JOURNAL*, vol. xiv, pp. 1587-1812.)

Sal lithin, according to the advertisement in hand, combines lithium benzoate and citrate, 12.5 per cent, with sodium phosphate and other salts. "Unequaled in Uric Acid Diathesis," "Blood Cleanser," etc. It will be perceived that we have here nothing new, nothing original, and nothing which the practitioner can not obtain from any reputable pharmacist on his own prescription independently of this Bioplasm Company.

In the same circular we find on pages 4 and 5 an invitation in most undignified language to prove the untruthfulness of the assertions made regarding bioplasm, and then in order to save one even that slight trouble (really none at all) the evidence needed is furnished in the following: "Its origin, composition, and formula is published" (the grammar is theirs), "the only reservation being its working or cultivation formula. If this debars it for any one, such are also debarred from using all proprietary remedies, all synthetic products, or even the compounds of the Pharmacopeia, as each manufacturer holds his carefully designed and economic working formulas as a part of his stock in trade and a secret."

This misrepresentation in regard to the Pharmacopeia preparations is wholly gratuitous.

The number of uric acid solvents, each of which is the "most powerful known," is truly surprising. It is still more surprising that mankind continues to suffer from rheumatism and gout, nearly as much as they did before these "discoveries" were made.

Mr. J. LeRoy Webber, Ph.G., is credited by the Bristol Myers Co. with originating sal hepatica, the really "most powerful" one. It is passing strange that so great a genius should continue to devote his time to supervising its manufacture, since any youth of common intelligence could certainly do it quite as well. This truly wonderful discovery of Mr. J. LeRoy Webber, Ph.G., is also useful, so we are told, in the treatment of "Fullness of Blood," likewise "Acidity of the Stomach," though most of us prefer some acidity of the stomach and not a little blood to ill our arteries.

If further literature of a similar nature is desired, we suggest the careful reading of the *Uric Acid Monthly*, particularly with regard to the munificent offer for reports "suitable for publication."

It must be evident to the least observant that we are drifting far from the safe course in therapeutics when men, who have not sufficient knowledge to avoid these absurdities, so glaring that they become apparent on the first appeal to reason, thus exploit our profession and use us to dupe the public. Are we to continue in this degrading position or are we to assert our independence and demand common sense, at least, from those who seek to serve us? The arrogance of the nostrum vendors under the cloak of servility is become insupportable, and physicians should no longer tolerate such abuses.

While we have divided the cathartics (under which term we include laxatives) into two general classes, vegetable and saline, this has been done merely for convenience of grouping, and we shall now take up the more important laxatives and cathartics which have not been discussed.

HYDRARGYRUM CUM CRETA.—U. S.—Gray Powder.—This contains 38 per cent. of mercury (metallic) mechanically mixed with clarified honey and prepared chalk.

Average dose 0.25 gm. (4 grains)

MASSA HYDRARGYRI.—U. S.—The well known "blue mass" contains 33 per cent. of mercury (metallic) combined with glycyrrhiza, althea, glycerin, and honey of rose.

Average dose 0.25 gm. (4 grains)

HYDRARGYRI CHLORIDUM MITE.—U. S.—Calomel is required by the Pharmacopeia to contain at least 99.5 per cent. of pure mercurous chloride.

There is, perhaps, no drug which is better known than calomel, and we can afford to give it space in inverse proportion to its importance.

Average dose (as a laxative) 0.12 gm. (2 grains)

Despite the widespread use of the mercurials, their mode of action remains a problem. Some authorities assert that calomel must be converted into the oxid, others that small amounts of the bichlorid are formed, and that this is the active agent. The effect on the organism is not less a matter of dispute, pharmacologists usually deny that it causes an increase of bile flow, as experiments, made by careful observers, on both man and animals with biliary fistulae have failed to demonstrate any increase. Calomel acts as an antiseptic and the bile is thus protected from decomposition, while the increased peristalsis affords less time for its absorption. Some of the older clinicians, however, still hold to the theory that it really does increase the amount of bile secreted by the liver. However calomel may act, it is the best remedy we possess for that form of indigestion and constipation which is frequently called "biliousness."

Mercury and chalk, commonly called gray powder, does not occasion so much nausea as the other mercurials in common use, and is usually preferred for children who suffer with indigestion and constipation with considerable intestinal putrefaction.

The mercurials are contraindicated in chronic conditions, such as tuberculosis, and in the latter months of pregnancy. The use of calomel as a diuretic has been mentioned, and, while Wood pronounces it useful in chronic parenchymatous nephritis, others maintain that it is injurious, and Sollmann has recently suggested that great conservatism should be exercised in its employment. At any rate it should not be used merely for its purgative effect when nephritis exists, or only with great caution.

SULPHUR PRECIPITATUM.—U. S.—**SULPHUR SUBLIMATUM.**—U. S.—and **SULPHUR LOTUM.**—U. S.—Are the three forms in which Sulphur is now official. Either the sublimed or the washed may be used as a laxative. The sulphur is slowly converted in the intestine into the sulphid, only to a small extent, which acts as an irritant, while the greater part of the sulphur remains insoluble and acts mechanically—merely by its bulk. Washed sulphur is an ingredient of compound powder of glycyrrhiza.

Average dose (of any of the three forms of sulphur) 4 gm. (60 grains)

(To be continued)

Clinical Notes

ACUTE ABDOMINAL SYMPTOMS IN TYPHOID FEVER FROM INFLAMED MESENTERIC GLANDS,

TWO ILLUSTRATIVE CASES

SIMULATING INTESTINAL PERFORATION AND OTHER ACUTE ABDOMINAL CONDITIONS *

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DETROIT, MICH.

Acute abdominal symptoms in typhoid fever have recently attracted considerable interest because of the importance of early diagnosis in intestinal perforation.¹

The literature is becoming filled with records of cases containing additions to our knowledge of diagnosis and treatment.² These studies have shown the varied symptomatology of intestinal perforation and have demonstrated that exploratory laparotomy for diagnostic purposes is more conservative than waiting, in doubtful

* Read before the Michigan First Councillor District Medical Society Dec. 22, 1905.

¹ Scott. *University of Penn. Bull. Mar and June, 1905* p. 981.
² McCrae and Mitchell. *Johns Hopkins Hosp. Report*, vol. x nos. 6, 7, 8, 9.

cases. As a result, an increasing number of patients have been operated on in whom no perforation was found. Almost every surgeon of experience has had one or more of these cases.³

I wish to relate the histories of two typhoid fever patients who had such pronounced abdominal symptoms that in one intestinal perforation was suspected, and in the other a complex of abdominal conditions—appendicitis, tuberculous peritonitis or typhoid fever complicated by one of these conditions. Laparotomy was performed in both instances and in neither case was there any evidence of peritonitis, intestinal perforation or any of the other abdominal conditions suspected. The symptoms were ascribed to swollen, inflamed mesenteric glands in the region of the cecum.

I am indebted to Dr. John Lovett Morse of Boston for the privilege of reporting these cases.

CASE 1—Typhoid fever, acute abdominal symptoms, on the thirty-ninth day simulating perforation, exploratory laparotomy, only inflamed mesenteric glands found to account for the condition.

Patient—W. W., male, aged 26, was admitted to the Boston City Hospital May 20, 1903, on the ninth day of his illness.

Examination—He gave an ordinary typhoid history and on admission had the usual apathy, flushed cheeks, characteristic tremulous, coated tongue with red tip and edges, an enlarged palpable spleen and a profuse roseola. The temperature was 103 and the pulse 92. On the day following admission the Widal reaction was positive in a dilution of 1:80 in forty-five minutes, and the leucocyte count was 7,200.

Course of the Disease—He passed through a moderately severe course of the disease, having a small rectal hemorrhage on May 29, the nineteenth day of the disease. At this time there was no complaint of pain, the abdomen was not distended, he was not restless nor delirious, his pulse was of excellent quality and not changed in rate, and the leucocyte count was 4,600.

On June 2, the twenty-third day, there had been no further rectal hemorrhage, the abdomen was not distended nor tender, the temperature was running with a wide diurnal swing and reaching a lower level.

On June 17, the thirty-eighth day, the note says "uneventful convalescence, patient now up and about the ward for three days." This indicated that the temperature had been normal for about ten days, that the diet had been increased to a simple mixed hospital diet, that the patient was doing light work about the ward and expected to be discharged in a day or two.

On June 18, the thirty-ninth day, early in the morning the man complained for the first time of "cramps in the stomach," which he said began late the day before. The pain was severe enough to keep him from sleeping, though not sufficient to make him complain to the night nurse. At 8 a. m., when seen by the house physician, he had a pale, anxious expression, a pulse in the neighborhood of 120 and a temperature of 100.6. His abdomen was moderately distended and tympanitic, with tenderness and resistance more on the right side. There was no nausea, the bowels moved freely after a soap-sud enema, the defecation was semisolid, light brown and without macroscopic blood. The leucocyte count, taken at this time, was 22,100. At 11 a. m. the patient was seen by Dr. Lund in consultation with Dr. Morse. He still had the anxious expression and pallor. The pain had persisted, more severe at one time than another, and indefinitely localized in the right side of the abdomen. There was moderate distension, slight rigidity, muscular spasm and tenderness. No masses were felt and the tenderness could not be definitely localized, although at times it seemed to be more marked in the right lower quadrant. The leucocyte count remained as high as in the morning, 21,400. The temperature had dropped a little, to 99, while the pulse remained in the neighborhood of 120.

A diagnosis of intestinal perforation (?) was made and immediate operation advised. The patient was transferred to the operating room at 3:30 p. m.

Operation—Dr. Lund made an incision two inches long under cocaine anesthesia in the right linea semilunaris, and the abdomen was opened without incident. There was no free fluid. The gall bladder was found in normal condition. At this stage exploration of the abdomen proving painful, on the patient's request, nitrous oxide followed by ether was given. Examination in the right lower quadrant, to which most of the pain was referred after opening the abdomen, revealed a mass of enlarged mesenteric glands, some of them the size of small hen's eggs. Counter abdominal incision was made, over the tumor, to determine if any broken down glands were present. Considerable congestion, but no evidence of breaking down was found. The abdominal wounds were closed in the usual way. There was a good recovery from the anesthetic.

On June 20, the forty-first day, the surgical note states that since the operation the patient has been very uncomfortable, complaining considerably of pain, his abdomen has been markedly distended, in spite of free bowel movements, there has been no vomiting.

By June 22, the forty-third day, the pain and distension had gradually decreased and there had been a steady improvement in the patient's general condition.

On July 6, the fifty-seventh day, "uneventful convalescence, abdominal wounds showing firm cicatrices, general condition good, patient anxious to go home, discharged at his own request to the surgical outpatient department."

Remarks—In this case the abdominal symptoms developed suddenly, on the thirty-ninth day of the disease, at the end of what appeared to be a normally progressing typhoid convalescence. Pain was the most striking symptom. It developed insidiously, was not extreme, but was lasting and more severe at one time than another. It was indefinitely localized in the right side of the abdomen. Accompanying the pain there was tenderness on deep palpation, slight abdominal distension and spasm of the right rectus muscle. There were no signs of gas or fluid in the peritoneal cavity and no tumor was felt. Hemorrhage was ruled out by the free bowel movement without blood. Besides the local symptoms there was the general picture of collapse—dusky pallor, anxious expression and rapid pulse, and a marked leucocytosis. All the above facts, when considered together, made the diagnosis of intestinal perforation very probable and the exploration of the abdomen in our opinion justifiable.

CASE 2—Typhoid fever, acute abdominal symptoms on the fifth day. Exploratory incision showed the condition to be due to inflamed mesenteric glands.

Patient—M. L., female, aged 6, was admitted to the medical side of the Children's Hospital, Boston, on Sept. 7, 1904, on the sixth day of her illness.

History—The history, given by the mother, was one of sudden onset with pronounced nervous and abdominal symptoms. On the day before admission the patient had complained of "pain in the stomach," and the mother noticed for the first time that her child's right leg was drawn up.

Examination—The patient was seen in the surgical outpatient department and recommended to the house with the diagnosis, "typhoid fever or appendicitis (?) for observation."

The admission physical note states that the child was poorly developed and nourished, that her cheeks were flushed, and that her face had a pinched, anxious expression. There was photophobia, the pupils were equally dilated and sluggish in their reaction to light, the tongue was swollen and covered with a heavy white fur, the heart was not enlarged, was regular and rapid in action with sounds of good character, there were normal resonance and breathing throughout both lungs. Examination of the abdomen showed slight distension, with moderate tympany and general tenderness, more marked on the right side, where an irregular mass could be felt, below McBurney's point. There was considerable spasm of the muscles in the right lumbar region, the right thigh was drawn to one-third flexion, and the tendon reflexes were increased. Blood examination showed a hemoglobin of 85 per cent and a leucocyte count of 13,800.

Course of Disease—September 8, the seventh day, on the morning following admission, the record states that the patient had been very irritable and restless, crying out in delirium and also sharply when disturbed, but making no complaint at other times, although she appeared to be in pain. She had taken small amounts of nourishment without vomiting, the bowels had moved freely following a soap-suds enema. At the time of the examination she lay with eyes closed and right leg flexed. There was a pained expression and dusky pallor, the pupils were equal and reacted to both light and accommodation, there was rigidity of the neck and extremities, probably voluntary. Examination of the ears was negative. There were a few squeaky rales at the base of both lungs, the heart action was rapid, and the sounds were of good character, the abdomen was flat, lax and slightly more resistant in the right lower quadrant, where a freely movable tumor of the size of a walnut could be felt. The tenderness was more marked in this region, and there was evident pain on pressure over the mass, psoas spasm was considerable, motion at the right hip was limited and apparently painful. Rectal examination revealed a bulging, resistant mass, on the right, similar to that felt by abdominal palpation. The child was delirious and semicomatose so that statements about pain were not reliable. The temperature ranged in the neighborhood of 105, the pulse was over 140. The urine was high colored, acid in reaction and had a specific gravity of 1015; there was a trace of albumin, no sugar and a few renal elements. The leucocyte count continued about the same, 13,400. The Widal reaction was reported negative, as would be expected, on the seventh day of this disease.

Operation—The patient was seen by Dr. Stone, in consultation with Dr. Morse, and abdominal exploration was advised. The diagnoses made at this time were, in order of preference, appendicitis, tuberculous peritonitis or one of these conditions complicating typhoid fever.

The operation was performed by Dr. Stone. Ether was administered and the abdomen was opened by the "usual appendix incision." The tumor was found to be a mass of enlarged, congested mesenteric glands, several of which were the size of walnuts. There was no evidence of perforation, peritonitis, or breaking down of these glands. The Peyer's patches were injected and thickened, as is usual in typhoid fever. The appendix was slightly congested as a part of the typhoid picture. The abdomen was closed without further operative interference. There was a good recovery from ether.

Postoperative History—The child was restless and delirious during the night following the operation, but responded fairly well to stimulation. The temperature remained high and the pulse rapid, ranging between 160 and 170.

On September 12, the eleventh day, the patient continued weak and irritable, crying out sharply at times in delirium. She had no nausea and did not vomit, but had to be forced to take her nourishment. She had begun to show emaciation with a sunken appearance about the eyes, the respirations were rapid, out of proportion to the temperature and changes in the chest. The abdomen was very slightly distended and tender in the region of the wound. The leucocyte count was 5,200, the Widal reaction was positive in a dilution of 1:80. The urine was acid, cloudy, yellow and with a specific gravity of 1022. It contained a trace of albumin and a strongly positive diazo reaction, sugar was absent.

The patient passed through a severe course of the disease with profound toxic symptoms and a complicating otitis media.

On October 8, the thirty-fifth day, the clinical note says "Improvement slow, temperature staying down, patient very weak, unable to sit up but for a few minutes at a time." She showed considerable emaciation and still had a purulent discharge from the right ear. The pulse was of good character and the appetite was improving.

On October 22, the forty-ninth day, the patient had gained sufficiently in strength so that she was "discharged relieved to the Convalescent Home."

Remarks—The abdominal symptoms in this case occurred early, on the fifth day, in the course of a severe typhoid. At this time there was no roseola, the spleen was not enlarged

and could not be felt, the Widal reaction was negative, the heart action was rapid, instead of being relatively slow, there was a moderate leucocytosis, all of which made the diagnosis of typhoid uncertain. The presence of a tumor in the right iliac fossa still further complicated matters so that the real state of affairs never once suggested itself. Appendicitis was the preferred diagnosis of the physician as against tuberculous peritonitis of the surgeon, with in either case possibly a complicating typhoid fever. The diagnosis of tuberculous peritonitis was influenced by a history of failing health for the past two years.

The striking feature in the case was the tumor. If this mass had not been felt the condition might very well have been taken for perforation and peritonitis, as in the first instance. In regard to the other local symptoms, they were obscured by the intensity of the general nervous condition, however, the impression given was that there was a constant, severe pain, which was paroxysmal in character, localized in the right iliac region, the region of the tumor. How much the local symptoms influenced the general condition could not be determined.

As frequently happens after a diagnosis has been made positive by exploration, the question came to us "Why did not we think of that before?" Those of us who had seen both cases were immediately struck by their similarity and convinced that the symptoms were due to the inflamed, mesenteric glands. We had the feeling that we might have diagnosticated the second case correctly and would certainly try to differentiate the condition in the future.

That acute abdominal symptoms simulating intestinal perforation and peritonitis could occur during the course of typhoid fever from swollen, inflamed mesenteric glands, has been thought probable for some time, definite statements in the literature on this point, however, are very few. Berg⁴ says that it is not uncommon for patients to develop all the clinical manifestations of a localized peritonitis at sometime in this disease. It is his belief that in some instances these symptoms may arise from stretching of the peritoneum by swelling of the mesenteric glands. Armstrong⁵ reports opening the abdomen in two cases without finding a suspected perforation. In one patient no cause was found, in the other he considered the symptoms to be due to swollen mesenteric glands. In discussing Armstrong's paper, Billings⁶ remarked that pain and other symptoms simulating perforation might be due to inflammation and infection of the glands of the mesentery. McCrae,⁷ in his analysis of abdominal pain in 500 cases of typhoid fever, states that in 70 cases in the series there was no known cause for the pain. Fourteen of the patients besides pain had local abdominal symptoms simulating perforation. Two of these patients died, both apparently of intense toxemia, and at autopsy no cause could be found for the acute abdominal symptoms, unless they were due to enlarged mesenteric glands. Abdominal pain has been described as occurring with suppurating mesenteric glands of typhoid fever, but whether the ordinary enlarged glands can give rise to pain, he says is a question. Finally, Wilson⁸ mentions having seen several cases of sudden intense pain on the right side of the abdomen in the iliac region with rigidity of the muscles and but very little constitutional disturbance. In a few hours these symptoms passed away and the patient was left apparently as well as previously. He was at a loss to account for the condition, which is certainly suggestive in this connection.

4. Berg. Medical Record March 1901 p 441

5. Armstrong. Annals of Surgery November 1902 p 730

6. Billings. Annals of Surgery November 1902 p 622

7. McCrae. New York Med. Jour. May 4 1904

8. Wilson. THE JOURNAL A. M. A. April 1905 p 1026

There was no doubt as to the cause of the acute abdominal symptoms in our cases. In the first patient, previous to opening the abdomen, the symptoms were more on the right side, and on exploration, the pain was definitely referred to the enlarged glands in the ileocecal region. In the second case, although there was profound depression of the nervous system, it was evident that the local abdominal symptoms were associated with the large mass of glands in the ileocecal region.

LeConté⁹ has recently reported a case of ruptured suppurating mesenteric glands occurring during typhoid fever with symptoms simulating intestinal perforation. He reviews the other reported cases and discusses the anatomy and pathology of these glands in typhoid fever. His studies show that it is the ileocecal group of glands, as in the present cases, in which there is the greatest change and enlargement. He finds that the breaking down of these glands is a rare condition, there were but six reported cases at the time his paper was written (1901). Enlargement of the glands, sufficient to produce subjective and objective symptoms, is probably much more frequent. The enlargement itself is an almost constant lesion in typhoid fever. In over one-third of the exploratory laparotomies for suspected perforation, no cause was found to account for the symptoms. With the exception of the instances already mentioned, no statement was made in regard to the condition of the glands of the mesentery, consequently, nothing definite can be said as to the frequency of acute abdominal symptoms from this cause.

Without going into a detailed account of symptoms, a few points can be emphasized which might differentiate intestinal perforation. Of first importance, it seems to me is the presence of a tumor in the right lower quadrant. There may be fullness and tenderness in intestinal perforation on rectal examination, but a freely movable, tender mass in this region ought to suggest something more. In our second patient such a mass was easily felt. It led us to consider appendicitis and tuberculous peritonitis. In the first case there was no record of a tumor, but from the size of the mass of glands and the state of the abdomen, we were almost certain they could have been palpated. Examination should be made both by abdominal and rectal palpation in every case of this sort. Symptoms due to gas and fluid in the peritoneal cavity, obliteration of liver flatness and flatness in the flanks occur late or not at all in most cases of perforation. Of earlier occurrence in some instances is the arresting of peristalsis and spasm of anterior abdominal muscles producing a splinting effect resulting in the pushing up of the lower border of the liver. As would be expected in the two cases in question, none of the above signs was present. There was but slight distension, no change in the area of liver flatness, no flatness in the flanks and peristaltic movements persisted. General constitutional symptoms are very variable in cases of perforation, but usually there are signs of shock followed by the collapse of general peritonitis. In our two cases the symptoms were more those of severe toxemia.

It is of interest to note in this connection that symptoms due to swollen mesenteric glands may occur early or late in the course of typhoid fever, in the first instance on the thirty-ninth day, and in the second on the fifth day of the disease.

Elsberg,¹⁰ in discussing the indication for operation in intestinal perforation, has made the statement that

when the symptoms have been at least of twelve hours' duration and the signs and symptoms point more to perforation than anything else, especially if the patient's general condition is growing worse, operation is justifiable. In both cases the pain and local symptoms had persisted for more than the above time limit, the general condition had grown progressively worse, and from our physical examination we were not satisfied with the state of the abdomen. While believing that needless exploration should be avoided, as far as possible, we felt justified in our advice in these cases. If in the course of typhoid fever there are acute abdominal symptoms especially localized in the right lower quadrant, and a freely movable tumor can be felt there, it would seem safe to adopt an expectant plan of treatment. On the other hand, if there is any doubt, as there usually will be, immediate exploration should be advised, as the danger of operation is slight, bearing out Munroe's¹¹ statement "Exploration where there is no peritoneal infection or serious organic lesion is practically harmless."

CONCLUSIONS

The following conclusions may be drawn

1 In some of these cases in which exploration showed no cause for the symptoms, these were probably due to changes in the mesenteric glands.

2 Some of the recoveries which have been reported from intestinal perforation without operation probably occurred in cases of this sort in which the symptoms simulated perforation.

3 McCrae's suggestion that pain and acute abdominal symptoms might be due to enlarged mesenteric glands is credible, and further observation and study will probably show that this condition is not, relatively speaking, a rare complication in typhoid fever.

FIBROMA OF THE NASOPHARYNX TRACHEOTOMY, EXTERNAL CAROTID LIGATION, EXTIRPATION, CURE CHEVALIER JACKSON, M D PITTSBURG, PA

History—S D, male, aged 14, gave a history of an increasing nasal stenosis of a few years' duration. Several pieces of a "polyp" had been removed by physicians at different times, followed in each instance by severe hemorrhage, but with no relief to the breathing, which grew worse until scarcely enough air to sustain life could be inspired, even with the mouth widely open. His parents feared he would choke to death at night, and he was awakened by a choking sensation every time he fell asleep. Death from inanition threatened because of increasing dysphagia. Bleeding had been frequent, and a week before admission a severe hemorrhage from the nose and throat almost exsanguinated the boy. Headache and earache were frequent and severe.

Examination—The boy was frail, emaciated, pale and anemic. Leucocytes were increased, hemoglobin was decreased. Nasal respiration was impossible, his mouth was never closed except to swallow, which was difficult. The right nasal chamber was occupied by a hard tumor, which pushed the septum over tightly against the outer wall of the other nasal fossa, thus completely occluding both. The right upper maxilla was bulged outward as if by an antral tumor. The velum was pressed forward on to the tongue, with which it was in contact at all times, except when lifted by a semi voluntary effort at each inspiration. Back of the tightly stretched velum a smooth, hard, glistening reddish, vessel streaked tumor filled the nasopharynx so completely that the finger could not palpate any but the visible portions of the growth. Diplopia and exophthalmos showed the bulging upward of the orbital plate

Operation—A clinical diagnosis of fibroma was made, my opinion being that it was bilobed and that it had its origin on the right side of the vault close to the right choana, all of which proved to be correct. General anesthesia in such a case is practically impossible. Respiratory arrest is synchronous with unconsciousness. Dr. John W. Boyce very kindly infiltrated an area over the trachea, which enabled me to open the trachea in a few minutes absolutely without pain. This was remarkable in a frail boy, who was watching our every movement. Chloroform was now skillfully administered through the tracheal wound by Dr. W. H. Strang. The right external carotid artery was ligated between the lingual and the superior thyroid arteries to forestall hemorrhage. A small probe, in whose point a small eye had been drilled, was threaded with braided silk and passed backward through the right nasal chamber. It was insinuated between the growth and the tightly stretched velum, through which it could be felt as it worked backward. When the eye point of the probe reached the free margin of the velum, the silk was caught with forceps and drawn out the mouth for a convenient length and the probe was withdrawn from the nose. The bight of a length of snare wire was tied to the nasal end of the silk, by means of which the wire loop was drawn back through the nose until it reached the pharynx. The loop was then insinuated around the presenting portions of the growth and worked upward by traction on the ends projecting from the nose. When the loop was felt to be taut around the base of the growth, these projecting wire ends were threaded through the straight canula of a Peters tonsil snare by my assistant, Dr. Ellen J. Patterson. Closing the snare handles, the growth was cut through at one stroke. The severed tumor was then delivered with strong forceps, without lacerating the palate, though this seemed imminent, owing to the tight fit of the growth.

The bleeding was about as much as from an adenoidectomy, nothing like the swelling up after the extirpation of a fibroma. Anterior and posterior plugs were placed and the tracheal canula which had been inserted to facilitate anesthesia was removed as soon as the boy came out sufficiently. The plugs were allowed to remain forty eight hours. No bleeding followed their removal.

The temperature rose to 101 F, but returned in two days to normal. The carotid wound healed promptly. The boy was out of bed on the third day, and was discharged well at the end of the week. No sign of pulsation was yet perceptible at the temporal artery two weeks later.

The right upper maxilla had undergone a pressure atrophy which had almost obliterated the antrum. There was no cartilage in the septum, probably also the result of the same process, and the nasopharyngeal cavity was enormous. The growth, which weighed 1,270 grams, was found by Dr. Ralph Duffey to be a pure fibroma.

When one looks over the appalling list of deaths on the table from hemorrhage in the removal of fibromata and over the list of preliminary operations, temporary and permanent jaw resections, etc., the contrast here recorded seems to furnish food for thought. I have ligated the external carotid artery thirty-four times without in any case an untoward result. Eight of these ligations have been preliminary to the extirpation of nasopharyngeal fibromata, and in no instance has the bleeding been serious. The greatness of the contrast can be realized only by one who has seen the blood well up out of the mouth like water out of a drinking fountain. External carotid ligation is a guarantee against hemorrhage, shock and collapse. Not only does it prevent loss of blood, but by diverting a greater quantity of blood into the internal carotid it increases intracerebral blood pressure. Whether this agrees with the physiologists' dynamics of blood pressure or not I do not know, but clinically I have seen throbbing headache and also insomnia of a few days' duration follow external carotid ligation, and I have seen no shock in eight cases of extirpation of nasopharyngeal fibromata cases similar to

ones in which death occurred from hemorrhage and collapse. In my opinion, these observations point to increased intracerebral blood pressure after the ligation. The influence of local anemia in the prevention of recurrence is, of course, an additional advantage, especially in cases of double ligation, or, better still, excision.

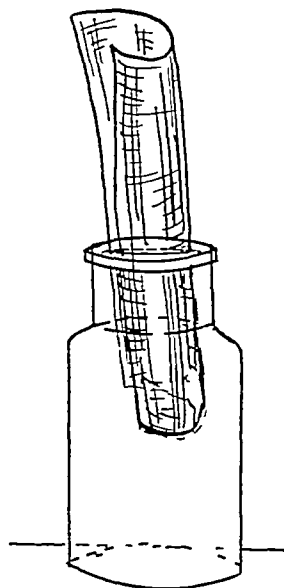
I do not consider an operation for true fibroma of the nasopharynx justifiable without preliminary ligation of one or both external carotid arteries. If the side from which the growth springs can not be determined, ligation of both external carotids is indicated, preferably with an interval of three or four days, during which the tracheal wound may be kept from healing by packing with gauze wrung out of mercuric bichlorid solution, no tube being worn and no air being permitted to pass through the wound. From this there is no danger of pneumonia. Nor do I consider it justifiable to administer a general anesthetic until after the trachea has been opened, if the growth be large enough to press the velum forward on to the tongue. I do not say that neglect of these precautions means death, but I claim that the mortality of these operations can be thus reduced practically to naught. Hemorrhage, dyspnea and chloroform act synergistically in the induction of collapse. Let us forestall hemorrhage by external carotid ligation and dyspnea by tracheotomy (under local anesthesia) so that we may give our chloroform in comparative safety.

METHOD OF WASHING SMALL PIECES OF TISSUE

GUTHRIE McCONNELL, M.D.
ST. LOUIS

I have devised a method of washing small bits of tissue which have been hardened in Zenker's or similar fluids, and which does away with the difficulties usually encountered in that proceeding.

As shown in the accompanying illustration, a piece of fine meshed copper wire netting is rolled into a cylinder and stuck



well down into a bottle. The bits of tissue are put in this and the water is turned on, all danger of losing the specimen is obviated as the water can not rise to any degree above the mouth of the bottle.

Until I happened to think of this method I had to devise rather elaborate or cumbersome ways of accomplishing the desired end.

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SATURDAY FEBRUARY 17, 1906

THE NATURE OF ENZYMES

Since up to the present time no ferments have been isolated in an absolutely pure condition we are entirely unfamiliar with their chemical characters, and consequently are obliged to recognize them solely by their action. So far as we know true enzymes never occur except as the result of cell life—they are produced within the cell and increased in amount by each new cell that is formed, and furthermore, they are probably present in every living cell without exception. As the same facts are equally true of the proteids, and apparently true of nothing else, it is natural to associate the enzymes with proteids and so to explain the importance of the proteids for cell life. If enzymes are obtained in any of the usual ways from animal cells or secretions they are always found to give the reactions for proteids, even if repurified many times, but it is well known that by any method of precipitating proteids the other substances in the solution tend to be dragged down by the colloids, and it is possible that the enzymes are merely associated with the proteids in this way. Furthermore, enzymes are known to become so closely attached to stringy proteid masses, such as fibrin and silk, that they can not be removed by washing. Some observers have claimed that they have secured active preparations of pepsin and invertase that did not give proteid reactions and contained very little ash or carbohydrate, but it has so far been impossible to secure trypsin free from proteid, and diastase seems to be an albumose-like substance. Analyses of enzymes purified as completely as possible do not have great worth, for these substances are probably far from pure, however, it is of some importance that they vary greatly in the proportions of carbon, hydrogen and nitrogen which they contain, indicating that possibly different enzymes may be of very different nature. Active gum enzymes, with oxidizing properties, are said to have been prepared free from nitrogen.¹

Macallum has shown microchemically that phosphorus is closely associated with the formation of zymogen granules in cells, which seem to be started in the nucleus, and there are many other observations suggesting that certain ferments are closely related to the nucleopro-

teids. This is particularly true of the oxidases, which seem also to contain iron and manganese. A final point of importance in support of the proteid nature of enzymes is that pepsin destroys trypsin and diastase, while trypsin destroys pepsin.

So uncertain, however, is our information concerning the chemical nature of the enzymes that it has become possible for a hypothesis to be developed urging that enzymes are immaterial, that the actions we consider as characterizing enzymes are the result of physical forces which may reside in many substances, and perhaps even free from visible matter. Arthus, who has been the chief champion of this very interesting conception, compares enzyme action to such forces as magnetism. A magnetic iron bar loses its characteristic property when sufficiently heated just as an enzyme does. Dissolve either the magnet or the enzyme in strong hydrochloric acid and it loses its power to affect other substances. It has been equally impossible to isolate enzymes and magnetism, both of which are recognized by their actions and not by themselves. Just as light, heat and electricity were once considered as matter, so has it also been with enzymes, and Arthus believes that they will eventually be stricken from the list of material things and considered as forms or a form of energy. There can be no question that this conception rests on strong grounds, and it possesses the stimulating qualities that make an hypothesis helpful, but, as Oppenheimer says, all chemical substances may be considered in the same way. We recognize all bodies through some form of energy, if we speak of sulphuric acid it is really of the properties of energy it shows, such as its taste, which is the energy imparted by its ions to the nervous system, or its combining with bases, etc., which also is a manifestation of energy. In the same way we recognize the ferments, and we may properly believe that they are fully as definite substances as is sulphuric acid. The magnet comparison also fails when we remember that the magnetism can be introduced into a bar of iron and removed at will, but as yet it has not been possible to introduce enzymatic properties into an inert proteid or to restore them to an enzyme that has been destroyed by heat.

Other valuable evidence of the material existence of enzymes is their specific nature, lipase affecting only fats, and trypsin only proteids, indicating chemical individuality. They are true secretions, formed within the cell by recognizable steps, and, furthermore, when injected into the body of an animal they give rise to the formation of specific immune bodies that antagonize their action. Emil Fischer's work with the sugar-splitting enzymes, moreover, indicates that they owe their action to their stereochemical configuration. He prepared two sets of sugar derivatives which differed from each other solely in the arrangement of their atoms in space (i. e., isomers) and found that one specific enzyme would split members of only one of the sets, while another would act only on the variety with the

¹ A recent paper by Tschirsch and Stevens casts considerable doubt on this statement. *Pharmac. Centralblatt*, 1905, vol. Ivi, p. 501.

opposite isomeric form These experiments make it very probable that there must be a certain relation of geometrical structure between an enzyme and the substances it acts on and leaves little room for question of its material nature

Bredig has found that colloidal solutions of metals have many of the properties of true enzymes, accomplishing many of the decompositions produced by enzymes, being affected by temperature of nearly the same degree, and even being "poisoned" by substances that destroy or check enzymes The only possible explanation of these phenomena seems to be that the effects are brought about by surface phenomena A colloidal solution of platinum, so far as is known, differs from a piece of metallic platinum solely in the enormously great amount of surface it offers in proportion to its weight, and it is well known that surface may affect chemical action Hence we have the possibility that some enzyme actions at least may depend on the existence of a very large surface, and since by no means all colloids are enzymes, that this surface must bear a certain relation in form to the surface of the body that is to be acted on

COPPER SULPHATE INSUFFICIENT FOR WATER PURIFICATION

We have referred several times to the claim made in some quarters in behalf of copper sulphate as a means of ridding water, not only of obnoxious algæ and infusoria, but of pathogenic bacteria as well In so doing, we expressed hesitation about accepting, on the evidence then available, the doctrine that the addition of a few pounds of copper sulphate to a large body of polluted water was sufficient to free the water from dangerous germs It now appears that this conservative attitude was fully warranted A series of important investigations carried out on this subject under the auspices of the progressive State Board of Health of Massachusetts have just been published,¹ and serve to shed a good deal of light on points heretofore obscure It is shown that not only is the use of copper sulphate in water filtration not an aid to purification, but that, on the contrary, when the salt is applied directly to the water on the surface of a filter, it reduces the efficiency of the filter very materially, and eventually would seriously impair the essential biologic action of the filter In accordance with the thorough-going methods of the Massachusetts Experiment Station, this statement is based on experiments lasting for a full year

A prolonged experimental investigation on the bactericidal action of copper is also reported in the same connection The important conclusions here reached as the results of extended experiments are notably different from those based solely on a small number of tests made with limited quantities of water in a laboratory

The writers (Clark and Gage) "believe that the treatment of water with copper sulphate or by storing in copper vessels has little practical value" Their principal reason for this conclusion is that although the removal of *B coli* and *B typhosus* is occasionally accomplished by dilute solutions of copper sulphate, these organisms may both live for many weeks in water containing copper sulphate in greater dilutions than 1 to 100,000, and in order to be safe, dilutions of 1 to 1,000 must be used in which case the water becomes repugnant to the user because of its strongly astringent taste As regards the standing of water in copper vessels, the time necessary to effect complete sterilization is so long that a receptacle of almost any other material would seem to be as effective as copper Metallic copper seems to have little more "germicidal power" than iron, tin, zinc or aluminum The writers add "In some instances very dilute solutions of copper sulphate or colloidal copper absorbed from contact with clean metallic copper, appear to have a decidedly invigorating effect on bacterial activity, causing rapid multiplication, when the reverse would have been true had the water been allowed to stand the same length of time without any treatment"

Whatever proves to be the merits of the application of copper sulphate to the water of reservoirs infested with malodorous algæ—and there is reason to think that success will attend the method in this field—there is no good ground for the assumption that sewage-polluted water can be made pure by the addition of this chemical

THE CENTENNIAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

In the two last numbers of *THE JOURNAL* may be found some account of the proceedings of the Medical Society of the State of New York during the recent meeting in Albany The occasion is of such importance, however, especially certain features of this annual session, that it is a matter of marked interest to the entire profession The arrangements to celebrate appropriately the one hundredth anniversary of the foundation of the society had been perfected and were carried out in the most fitting and interesting manner The address of the president, Dr Joseph D Bryant, treated in felicitous manner the history of the society, the disruption of twenty years ago, and the recent cordial union of the two state organizations into one great society One of the principal addresses of the occasion was by ex-President Cleveland, who is also a former citizen and ex-governor of the State of New York Appropriate addresses were also made by Dr William H Welch of Baltimore and Dr William W Keen of Philadelphia Elaborate addresses on medicine, surgery and sanitary science were prepared, respectively, by Dr Samuel B Ward of Albany, Dr Roswell Park of Buffalo and Dr Herman

¹ Supplement No 2 1906 *Journal of Infectious Diseases* p 172 209

M Biggs of New York It was regretted by all that Dr Roswell Park, on account of illness, could not be present His address was read by Dr Hopkins of Buffalo The extent and excellence of the scientific program was not impaired by the centennial proceedings, the papers and discussions being of the usual high standard of the society

The feature of the meeting, most interesting to physicians generally, was the cordial greeting and fellowship of those who so long had been separated by rival state organizations The full attendance on the scientific sessions, the brilliant annual dinner, which filled the large hall to overflowing, attested the completeness of the reunion

Immediately following the address of the president of the society, the President of the American Medical Association Dr L S McMurtry of Louisville, made a brief address, expressing the gratification of the entire profession at the unification of the profession in the Empire State and cordially welcomed the society on its resuming its place as the constituent branch of the national Association in New York The proceedings throughout were marked by the most cordial spirit of co-operation, which assures for the reorganized society a new era of professional and scientific advancement

The universal satisfaction and pleasure arising from the success of this memorable meeting were marred by the sudden illness, terminating fatally a few days later of Dr George Ryerson Fowler of Brooklyn One of the foremost of American surgeons, and a man of attractive personality, he had devoted himself zealously to the harmonious union of the two societies As a member of the conference committee of the society he contributed largely to the result attained As chairman of the centennial committee he labored early and late to promote the success of that celebration His severe illness came on suddenly at Albany on the very eve of the meeting, and elicited throughout the anxious sympathy of his colleagues

OPPOSITION TO ORGANIZATION WHY?

Until a few years ago the medical men of this country have practically gone each his own way, medical societies or associations have been few and far between and of small membership Now that physicians are coming together and are striving for the common good, and a spirit of association and comradeship and betterment is abroad in the land, we begin to see what the barren years have produced We find that unscrupulous manufacturers have amassed fortune after fortune by exploiting nostrums through the medium of our divided profession We find nostrums by the score lauded to the skies in medical journals owned or controlled by the nostrum manufacturers We find thousands of physicians depending on the one-sided and often untrue statements furnished them by the interested manufacturers—practically getting their “education” in therapeutics from

the trade “literature” of the proprietary medicine manufacturer The nostrum evil and many others have come on us because of our ignorance, our lack of association in work

There are always scavengers and carrion birds, and naturally there are commercial interests that are working against harmony and unity in the medical profession, for they see that harmony means association in work, association in work means enlightenment and knowledge, and, together, these mean an end to their dishonest and ill-gotten gains, for they grow rich on professional ignorance and the blind credulity which results The manufacturers of worthless nostrums do not wish to see “Unity, Peace and Concord” in the medical profession They are opposed to the rapid spread of organization—to the association in work which follows activity and harmony in county medical societies Also, and naturally, many of the “medical” journals of the country which can live only on the advertisements of worthless nostrums, do not contemplate this spirit of organization with any degree of pleasure Some are openly and crudely attacking and opposing either local or state organization, or the efforts of the American Medical Association to encourage it Others, more subtle, more wily, and hence more dangerous, are appealing to the “independence” of the individual physician, are flattering his own “individual judgment,” and telling him he is too wise to allow himself to be “herded” into an organization that is “controlled by machine politicians” This sort of thing is to be expected, and unless we know the actual reasons, the real dishonest motives for such biased or untrue statements, we can not understand them Association, work, study, enlightenment, will rapidly disclose the predatory hand of the nostrum maker, and we will realize why he is opposed to any and all organization that will bring physicians together for their own betterment and his loss through the disclosure of his lies

These are things that each one of us should carefully consider If we give no thought to ourselves, to whom shall we turn? If “independence” brings with it ignorance, strife and poverty, where is the advantage over association in work with the betterment, mental and financial, that results from harmony and study and that friendly feeling toward one’s fellows which we find in the healthy, active county medical society? What can anyone of us “sacrifice” by associating with his fellow-physicians in a county medical society? Is there any loss of dignity or of independence in trying to become better informed, better educated, more up to date?

TWO DEFINITIONS OF MEDICAL PRACTICE

Two judges in New York have recently given definitions of the practice of medicine One alleged definition was by Justice Joseph M Deuel, of the Court of Special Sessions, whose character was recently exposed by the evidence brought out in his unsuccessful suit for libel

against the editor of *Collier's Weekly*. The decision, to which we referred last week, was in the case of an osteopath who had been prosecuted by the County Medical Society and fined for practicing without a license. Judge Deuel decided, on appeal, that the practice of medicine consists of three things: Diagnosis, the discovery of the cause of disease, and its cure by drugs. According to this decision, if a physician does not prescribe drugs he is not practicing medicine. He added that the statutes aim to suppress the ignorant and indiscriminate administration of drugs, and that this is practically the whole intent of legislative medical regulation. Needless to say, if this were true, then most of the quacks and charlatans might continue their imposition on the public without let or hindrance. They might do everything, apparently even surgery, without fear of disturbance, provided only they did not prescribe medicine, yet this is the narrow view still held by some judges.

Fortunately for New York and the work of the County Medical Society in the suppression of quackery, the other definition of the practice of medicine recently made is eminently satisfactory. Judge Greene, of the city court, said that he had looked over the legal authorities of the state without being able to find a definition of what constitutes the practice of medicine. The case before him was one that absolutely demanded such a definition for its decision. Judge Greene defined the practice of medicine as "the exercise or performance of any act by or through the use of any thing or matter or by things done, given or applied, whether with or without the use of drugs or medicine and whether with or without fee therefor, by a person holding himself or herself out as able to cure disease, with a view to relieve, heal or cure, and having for its object the prevention, healing, remedying cure or alleviation of disease."

This definition ought to be of great value to the New York County Medical Society in its future prosecutions of illegal practitioners. It leaves very few loopholes, if any, through which they can escape. It would still be desirable to obtain an indorsement of this definition in a decision of the highest courts, but the fact that it has been given out judicially is, in any case, a useful step in advance. We believe that a rational interpretation of medical practice acts would warrant a similar definition in every state where such acts exist. As a lay journal very well says, "the person who undertakes to do the work of the doctor, which is the curing of diseases, does not evade responsibility by any trick of method. Whether there be administration of drugs, the laying on of hands, resort to bread pills, baths, dieting, blue glass incantations or hypnotism, the operation is the practice of medicine, in the spirit of the statute. This statute is for the protection of the public health, as well as to guard the credulous invalid from the rapacity of swindlers. Judge Greene's view will be accepted as the popular view, not only because it upholds a benign law, but because it is the expression of plain common sense."

THE ADVANTAGES OF NATIONAL QUARANTINE

Dr. Sexton's article in this issue of *THE JOURNAL* points out some of the advantages of a national quarantine over the present unsatisfactory systems adopted by the several states. The experience of last year was, in fact, an efficient object-lesson. It was not until the United States authorities took a hand that the epidemic was stayed and a miniature war between the states averted. His article, however, gives in useful detail some of the advantages as they appear to one who is on the ground and can speak from experience. As he says, the protection from disease is as important as the protection from a foreign foe, and we certainly would not leave the latter, with its expenses and perils, to be exclusively a function of local border authorities. There is much in the argument that the whole country should share the cost of the defense, although it may be certain sections are not directly threatened. The lack of uniformity of local quarantines is also a self-evident drawback to their efficiency, all the more so when, as was the case last summer, obsolete and inefficient measures are depended on in some quarters as against the more efficient ones in others. The general respect which is shown to national authority without regard to state boundaries is also a very important additional factor of efficiency. The unnecessary interruptions of commerce between the states due to whims of local health authorities is another self-evident evil which, touching, as it does, the pocket nerve, should be a strong argument in favor of national control where perhaps others might fail. Local political influences, moreover, can, as he says, be put out of the question as factors of inefficiency, a reform which Dr. Sexton deems imperatively needed. Under the Public Health and Marine-Hospital Service or under control of Army and Navy medical officers, such conditions need not exist. Whether all the states will willingly surrender their independent control of local quarantine matters may be questioned, but there is no doubt that it would be to their best interests to do so.

THE HOT SPRINGS DECISION

Some little time ago an Arkansas judge issued an injunction against any interference with a Hot Springs touting doctor, holding that the State law prohibiting such practices was unconstitutional and that the cession of the jurisdiction of the Hot Springs reservation to the General Government was also void. The case was promptly carried to the Arkansas Supreme Court, which has just rendered its decision. It says, as regards the jurisdiction of the United States and the right of Congress to enact laws regulating the use of the Hot Springs by physicians, that it raises a question in which it would follow the decisions of the Federal courts and which it does not feel bound to consider at the present time. If the United States jurisdiction did not exist, however, there would still be a valid state law against the practices of drumming or touting for patients, and the fact that the individual in question is being prosecuted in the Federal courts instead of in State courts would not justify the issuance of the injunction. The main question with the supreme court was whether or

not the state law is valid, and it decides that it is. The judgment was reversed, with an order to dismiss the complaint for want of equity. Our reputable confrères in Hot Springs are to be congratulated and commended for their energetic conduct in this matter. The drumming system at Hot Springs had become almost a prescriptive right and the reputation of the well-known watering place had suffered accordingly. The worthy practitioners there and the public generally have long felt the reproach, but could do little to remove it. It seems to us that the supreme court's decision, in the form in which it is given, fairly settles the question and should be effective in eradicating disreputable practices and practitioners from that popular health resort.

THE COST OF ANTIVACCINATION

At the present time there seems to be a sort of recrudescence of agitation against vaccination all over the country, but more pronounced in certain sections. This has been especially the case in Pennsylvania, where smallpox has prevailed to some extent and where, in consequence, the vaccination and isolation laws have been more strictly enforced than in ordinary times. In view of the attempts to influence public opinion and to bring about legislation for the repeal of compulsory vaccination laws, the commissioner of public health, Samuel G. Dixon, makes public some statistics and estimates of the state health authorities. From a careful estimate it appears that outside of the cities and boroughs, the average cost of quarantining smallpox cases is at the lowest figures \$350 for each individual patient. Special figures are given for special localities which, in a general way, bear out these statements. In the cities or boroughs the figures are also formidable in spite of the better facilities for isolating and quarantining these cases. For example, in a recent small epidemic at Williamsport, the public expense for caring for 18 cases was \$5,132 or \$281 apiece, while the cost of public vaccinations was only 29 cents apiece. These figures could probably be paralleled in many other states and communities where smallpox has prevailed, and ought to be of some influence with the taxpayers and legislatures. If a fraction of the cost of smallpox could only be assessed on those who are responsible for it, viz., the antivaccinationists, there would very soon be an end to their arguments and agitation. It is a disgrace to civilization that in any modern community of presumably civilized people such a wholly preventable disease as smallpox should exist, and a still greater discredit to their intelligence that they should oppose the one undeniably efficient preventive of its occurrence.

CHILD LABOR REFORM

Although the evil of child labor in factories or shops is apparently on the increase in certain sections, especially in the South, much encouraging progress is reported. Action on the subject was taken in twelve out of thirty-nine state legislatures last year, and existing laws are being enforced in a number of sections of the country. The temptations to neglect their enforcement

are great, the plea of poverty being often effective. The ultimate fact, however, remains in all cases that to make good citizens we must begin in childhood, and that any interference with the child's physique or moral welfare is a wrong that can not always be repaired—certainly not under the continuance of conditions which exist in factories, coal mines, etc., where children of comparatively tender age are too often largely employed. The medical profession should guide public opinion and take an active interest in all movements for a rational enforcement of child labor laws and their extension to states where they do not now exist. Under present conditions child labor is demoralizing morally, as well as crippling mentally and physically. If a child can not always secure its right to be well born (and that is a matter in which as physicians we are professionally interested) we are still more responsible in securing for it reasonable chances during the critical periods of growth. In some of its phases the labor question is a serious matter as far as childhood is concerned.

AN EXPERIMENT IN SEASICKNESS

Seasickness is not generally considered a serious disorder, and its victims do not get the sympathy they deserve, considering the amount of human happiness that is even temporarily destroyed. Occasionally, however, it is a very serious matter to individuals and its public importance may perhaps be estimated from the fact that to it has been attributed the influencing of the fate of nations by the limitations of their sea power which it caused. It is not altogether surprising, therefore, that there exists in France and possibly elsewhere in Continental Europe, a "League Against Seasickness." This body, it is reported, proposes to charter a steamer and invite some six hundred physicians to sail from Hamburg, Antwerp and French ports to Lisbon at the time of the International Medical Congress. It is expected that experimental study of the subject will be conducted, and that in this way practical tests of the various methods of treating the condition can be carried out. The projectors should consult naval architects in their selection of the vessel or in the provisions for its outfitting and ballasting. If they secure a sufficiently lively craft, and the Bay of Biscay and other seas are propitious or unpropitious according to the point of view, some valuable subjective and objective testimony may be secured.

MORE ON PURE FOOD LEGISLATION

According to the *Chicago Tribune*, it is probable that the Lorimer pure-food bill is to be, or is being, pressed before the Senate this week by its advocates. The same paper says, also, that this bill was partly drawn up by E. N. Eaton, analyst of the pure-food commission of Illinois who is opposing the Heyburn bill for fear that it would take the inspection and analysis of food products from the hands of state analysts and thus diminish their official functions and importance. If this is the case we do not envy them their responsibility should the Heyburn bill fail to pass. The Lorimer bill is not what

is wanted, and the most obvious cause of its introduction is the desire to defeat the Heyburn measure, which has the indorsement of all the best authorities and of all true well wishers for reform in the matter of food and drug adulteration. The need of a general law is made clear by such facts as are given in the *Chicago Tribune* February 13 concerning the efficiency of the Illinois pure-food commission. According to that paper, it is the practice of the Illinois commission to remit all fines for violations of the state pure-food law, and the manufacturers have come to regard the commission as a thing to be played with, a mere political machine. While similar bodies in some other states are relatively efficient these facts, if true, in Illinois are sufficient to destroy any dependence on state laws alone. The Lorimer bill, the National Manufacturers' bill and all other similar devices that have been or may be introduced are simply attempts to kill off the measure that is really demanded by all the best interests of the public. As Senator McCumber said in the Senate, their purpose was well stated in the *National Druggist* when the Manufacturers' Association was organized. The heading of its article was "How to Kill Pure-Food Legislation." It is bad enough for the Heyburn bill to find enemies among those who should be its friends, but, after all, opposition from state officials who, by their own inefficiency furnish an object-lesson for the need of General Government regulation, ought not to be very effective.

LODGE PRACTICE EVIL A SOLUTION?

The evils of lodge and contract practice are becoming more and more apparent. Medical societies have taken action in various ways, but none thus far taken tends to settle the question without strife. There seems to be at least one way in which this question may be settled, if an agreement to the plan can be brought about. Let the lodges continue to provide medical and surgical attendance for their members, and, if they so desire, let them have their official physicians. Instead, however, of paying the lodge physician a lump sum on the basis of so much per member, which results usually in absurdly small per capita payment, let him be paid the regularly accepted fees for such work as is actually rendered. In case a member desires attendance at the hands of some physician other than the one employed by the lodge, he could, under this plan, call in his own physician, and yet place his lodge at no more expense than though he had been compelled to call in the official lodge physician. We recently called attention to the conflict between the Shasta County (California) Medical Society and a local lodge of "Eagles." There have been some publications in the local press subsequently, and in one of these, emanating from the "Eagles," the statement is made that there have been very few cases of sickness for the lodge physician to attend, and that he has received about \$3.00 for each actual visit, whereas the regular fee for that community is but \$2.50 a visit. If this is the case, the plan here proposed would have resulted in an actual saving to the lodge, while at the same time it would have prevented the existence of strained relations between some of the population of that county and most of its physicians. Would it not be well for medical so-

cieties carefully to consider this idea and the advisability of trying to get the lodges in their various vicinities to adopt it? The co-operative principle, on which lodge and contract practice are based, is growing rather than contracting, and doubtless it will always exist even in its application to medical treatment. It would seem wise, therefore, to endeavor to devise some plan by which its existence will not be a menace to the self-respect of physicians and an influence tending to the reduction of fees—all too small even now.

Medical News

CALIFORNIA.

Scarlet Fever Epidemic—An epidemic of scarlet fever is reported to be raging in Martinez, 33 cases have been reported, with one death.

Fire in College—The four story frame building occupied by the College of Physicians and Surgeons, San Francisco, was damaged by fire January 18, to the extent of \$40,000.

Society Meeting—Santa Barbara County Medical Society, at its January meeting, elected the following officers: President, Dr. William B. Cunnane, vice president, Dr. David A. Conrad, secretary, Dr. William T. Barry, and treasurer, Dr. Charles S. Stoddard, all of Santa Barbara.

Prohibits Distribution of Medicine Samples—The Selma health board is reported to have recommended the passage of an amendment to the present health ordinance making it illegal to give away or to distribute samples of these remedies. The step is said to be taken not so much in the interest of the adult population, but as a matter of protection for children who are liable to be seriously injured by picking up such packages and eating the contents.

Personal—Dr. Beatrice M. Hinkle has resigned as assistant city physician of San Francisco and has removed to New York City.—Dr. Elhott H. Woolsey, Oakland, has gone to Honolulu for a two months' trip.—Dr. Simon Baruch, New York City, has taken charge of the new Paso Robles bath house.—Dr. Charles W. Bryson has been elected dean, and Dr. I. C. Fisher, vice dean, of the faculty of the Los Angeles College of Physicians and Surgeons. Dr. Walter S. Johnson has been elected trustee of the college and editorial manager of the *Los Angeles Medical Journal*, vice Dr. Nichols, resigned.

COLORADO

Officers Re-elected—At the annual dinner and meeting of the board and faculty of the Denver and Gross Medical College, January 26, Dr. Sherman G. Bonney was re-elected dean of the college and Dr. Robert Levy, secretary.

Pure Water and Power—Boulder, determined to secure pure water, has purchased several lakes near the crest of the Rocky Mountains which are fed by melted snow. A pipe line will convey the water to Boulder and the fall will furnish sufficient power for electric light for the city.

Rival Coroners—Dr. R. H. Paxton, who was deposed as coroner by the board of commissioners of Fremont County a few months ago because of alleged non residence, has brought ouster proceedings in the county court against Dr. William C. Stevenson, who had been appointed to fill the vacancy. Since Dr. Paxton's removal both physicians have been performing the duties of coroner.

Personal—Dr. Ella Head has been appointed physician of Greeley.—Dr. Richard W. Corwin, Pueblo, has been elected president of the conference of state charities and corrections, and Dr. Hubert Work, Pueblo, vice president.

DISTRICT OF COLUMBIA.

Personal—Dr. Robert F. Tobin has been appointed a member of the medical staff of the Washington Asylum, vice Dr. De Haven Sharp, deceased.

Agree on National Quarantine Bill—The members of the special committee, selected at a caucus of southern senators and representatives, have agreed on a national quarantine bill limiting quarantine measures to yellow fever and appropriating \$600,000 for the work.

Ophthalmologists Regret Burnett's Death—The Society of Ophthalmologists and Otolologists of Washington, at its regular meeting, held January 10, adopted a preamble and resolutions of sorrow at the death of Dr. Swan M. Burnett, its first president, and of sympathy to his widow and son.

ILLINOIS

Chicago

Personal—Dr. John C. Corbus, Mendota, has been re-elected superintendent of the Illinois Eastern Hospital for the Insane, Hospital—Dr. Gerhaud T. Nelson, Morris, while on his way home from a train early January 29, fell and fractured his leg.

Oak Park Hospital Plans—On February 11 announcement was made that the plans for the Oak Park Hospital have been completed. The site selected is at the corner of Wisconsin Avenue and Monroe Street with a frontage of 367 feet on Wisconsin and 171 feet on Monroe Street. The building will accommodate 65 patients.

Joint Meeting—On January 31 the Winnebago County Medical Society and the Central Wisconsin Medical Society held a joint meeting in Rockford at which the principal subject discussed was the treatment of tuberculosis. In the afternoon the visiting physicians were tendered a banquet at which Dr. Ernest C. Helm, Beloit, presided as toastmaster.

Personal—Dr. John W. Marchildon has returned after two years of study abroad—Dr. Anthony K. Warner has returned after a ten days' trip to Cuba—Dr. David J. Doherty, who leaves for the Philippines Islands February 22, is to continue his scientific studies and travel in the islands, and will probably remain away more than a year—Dr. Albert C. Hammett was seriously injured in a runaway accident, February 1.

Civil-Service Examination—Examinations for assistant physician in the insane hospitals will be held by the Illinois civil service commission February 27, at Cook County Hospital at the railroad and warehouse commission's rooms, the capitol building at Springfield and at the city council chamber, East St. Louis. The particulars of the examination were noted in *THE JOURNAL* of January 27. Applications will be received up to February 23 and should be made to Joseph C. Mason, secretary and chief examiner, Chicago.

Hospitals De Luxe—James Henry Smith has given \$500,000 to St. Luke's Hospital to be used in the construction of an annex to the institution for private patients to be erected on the Michigan Avenue property of the institution. The present hospital building will thereafter, it is said, be devoted entirely to free patients—The board of managers of the Presbyterian Hospital has already obtained pledges of \$352,000 toward the \$400,000 required for an addition to the institution which it is claimed, will be the finest and most luxurious hospital in the West.

The Dinner to Baron Takaki—On the evening of February 10 Dr. Nicholas Senn and the Senn Club gave a dinner in honor of Baron K. Takaki, surgeon general, Imperial Japanese Navy. Dr. Fernand Henrotin presided and introduced Dr. Senn, who delivered an eloquent address of welcome to the distinguished guest. Baron Takaki, after a brief response, delivered an address on naval sanitation which dealt chiefly with his researches on beriberi whereby the disease has been practically exterminated from the Japanese navy. When Baron Takaki entered the navy in 1872 three fourths of the entire sick list was made up of beriberi patients. In the endeavor to overcome this condition Dr. Takaki made a study of the ration of the navy and discovered that it contained too great a proportion of carbohydrates and too little albuminates, and furthermore that the prevalence of beriberi varied directly with the variation of these food constituents. As the result of his investigations, he endeavored to change the constituents of the ration by the issue of barley in place of a part of the rice ration. After many years of strenuous work required by the as strenuous opposition of officers and men of the navy, Takaki gained his point, and with the change in the ration beriberi practically disappeared. Baron Takaki also declared that beriberi can be artificially produced and that it can be positively prevented by diet. In closing his address he gave statistics of the total dead and wounded in the Russo-Japanese war up to Dec. 5, 1905. The total number of dead and wounded was 3,689, 1,892 of whom died instantly and 117 subsequently, leaving a balance of 1,680 wounded. The percentage of death rate was 54 and more than 90 per cent of the wounded returned to duty.

IOWA.

Variolinum—The State Board of Health at its last meeting discussed the subject of internal vaccination by means of variolinum. The homeopathic members of the board favored the idea, while the regular and eclectic physicians opposed it. A resolution was passed to ask the present legislature to define vaccination or to legalize the present definition of the State Board of Health.

New Medical Practice Rule—In accordance with a request from the medical faculty, the board of regents of the State University at its last meeting adopted rules regarding admission to the medical college in conformity with a recent action of the State Board of Medical Examiners providing that no physician will be allowed to take the examination for license to practice in Iowa unless he is a graduate of a school that has a four years' course and that does not give credit for any work done outside of the medical college.

Bills in the Legislature—The following bills have been introduced in the legislature. A bill for the registration of graduate nurses, and a bill asking for an increased appropriation for the State Board of Health Bacteriologic Laboratory at Iowa City. This laboratory was created by the legislature two years ago and began work in September, 1904. During this time, according to the last report of the director of the laboratory, more than 6,000 examinations have been made. The laboratory is proving very popular with the physicians of the state, and has been instrumental, through early diagnosis, in preventing a number of very probable epidemics of diphtheria and typhoid fever. The entire appropriation asked for will no doubt be granted.

MARYLAND

Baltimore

Personal—Dr. Edward Lindon Mellus is in Cairo, Egypt—Dr. Campbell P. Howard sailed for England, February 3.

Health Report—Influenza is reported to be very prevalent in Baltimore—During the week ended February 10 there were 30 deaths from consumption and 38 from pneumonia.

Senior Student Killed—J. Howard Hughes, a senior medical student at the University of Maryland, was killed by the accidental discharge of his pistol at Jersey City, N. J., February 4.

MASSACHUSETTS

Damaged by Fire—The residence of Dr. Robert Burns, West Newton, was damaged by fire February 8 to the extent of \$12,000.

Anti-Expectoration Law—Among the bills introduced in the legislature is one providing for a fine of from \$1 to \$10 for every person who expectorates in any public place except in receptacles provided for the purpose. This bill is strongly favored by the Society for the Prevention of Tuberculosis.

Alumni Meet—The Boston City Hospital Alumni Association held its annual meeting February 8. Dr. Charles W. Williams is succeeded as president of the association by Dr. George A. Leland. Dr. George T. Tuttle was elected vice president, Dr. William H. Robey, Jr., secretary, Dr. William H. Prescott, treasurer, and Dr. George L. West, member of executive committee.

Hospital Reports—The number of accident cases treated at the Massachusetts General Hospital in 1905 was 5,459, or 700 more than in 1904. The total of outpatients, however, decreased about 4,000. This is explained by the policy of the hospital of referring back cases to family physicians or institutions where they have been previously regularly treated. The McLean Hospital and the Convalescent Home in Waverly are under the same board of trustees. There was a total deficit for the three institutions for 1905 of \$23,000 as compared with \$21,000 in 1904. It is expected that the new building for women at Waverly, made possible by the bequest of Edward W. Codman and to be called the Codman House, will be ready for occupancy in 1906.

Warren Long in Service—Of the resignation of Dr. John Collins Warren the trustees of the Massachusetts General Hospital say:

In January, 1905, the term of Dr. John Collins Warren came to an end and for the first time in our history the annual report appears without the well known name of Warren on its pages. It was voted in accepting the resignation of Dr. Warren that the following tribute be placed on our records:

"John C. Warren and James Jackson inspired the efforts that led a general public to establish this hospital in 1814. Dr. Warren remained in the service of the hospital until the year 1853. J. Mason Warren became a member of the surgical staff in 1846 and died in the service of the hospital in 1867. John Collins Warren's name first appeared on the rolls of the hospital in 1865, and with

his resignation there closes for the present this illustrious succession through our whole history of three men, father son and grandson who each in turn have been conspicuous for able conscientious and devoted service to this great charity. A service which deserves and receives the grateful notice of the trustees and the thanks of the unnumbered patients who have profited by their skill and devotion

MINNESOTA.

Ramsey County Election.—Ramsey County Medical Society had its annual meeting January 9, at which Dr Burnside Foster was elected president, Dr Paul Cook, vice president, Dr Frederick Leivitt, secretary treasurer, and Dr Alvah F Whitman, necrologist

Two Rooms Endowed.—In consideration of the gift of \$350 made by David C and Frank P Shepard, to pay off mortgages against St Luke Hospital, St Paul the trustees have invested the donors with an endowment title to two rooms to be designated and known as the "Frances Aurelia Shepard Endowment"

Old Vienna Students Meet.—On February 3 physicians of Minneapolis and St Paul who have studied in Vienna, held their first annual banquet. Dr Jehiel W Chamberlain, St Paul, was elected president, Dr Louis A Nippert, Minneapolis, vice president, and Dr Emil S Geist, Minneapolis, secretary and treasurer

Offended at Governor's Action.—It is reported that a majority of the State Board of Medical Examiners is preparing to oppose the action of Governor Johnson in reducing the homeopathic representation on the board from three to two. The governor recently appointed Dr Oswald Leicht, Winona, a regular, to succeed Dr William A Beach, Mankato, a homeopathic practitioner. The governor states that his failure to name a homeopath was an oversight, but that his action is irrevocable

MISSOURI.

To Stop Improper Advertising.—At the February 10 meeting of the St Louis Medical Society announcement was made that legislation had been discovered whereby the indecent advertisements of medical firms in the lay press could be suppressed, and the firms successfully prosecuted and driven out of business

Reform in Control of Municipal Institutions.—At the meeting of the St Louis Medical Society, February 3, the joint medical council which consists of delegates from the various medical organizations of the city, presented a plan looking to reform in the system of control and management of the city's hospitals and dispensaries. At the present time the hospitals are under direct control of the health department, the health commissioner having power to appoint all the employees, medical or otherwise of the various hospitals under the care of the city. There is no provision for a medical staff, either visiting or consulting the entire medical as well as the executive charge of the hospitals being placed in the hands of a medical superintendent appointed by the mayor. To replace this antiquated system the council has suggested a plan, the principal features of which are as follows: 1 The absolute separation of the health department from the hospital department, 2 the vesting of hospital control in a board of trustees to be elected by the people, 3, the appointment by this board of an executive head for each institution, and 4, the appointment of a medical staff. The plan as presented was endorsed *in toto* by the society and will be brought up for consideration before the other societies represented in the council. It would appear that the profession is a unit in demanding these reforms which will, however, require amendment of the city charter before they can be made effective

NEBRASKA.

Training School Opened.—The training school of the City Hospital, Ord was opened January 1, under the charge of Dr Chester A Brink

Refused License.—The State Board of Health, after a lengthy hearing adopted the following resolution regarding the application of Dr Alfred Welsh of Haigler for a license to practice medicine: Resolved That a license to Dr Welsh to practice medicine be denied at this time and that the matter be referred back to the board of secretaries and leave granted to amend his application to be hereafter considered

Injunction Made Perpetual.—In the suit of Dr Baker Madison against Dr John R Montgomery of the same place, in which an injunction was asked on the ground that the defendant had sold his practice to the plaintiff and had agreed not to practice in that field, the district judge decided that a physician who sells his practice to another may not resume practice in the same field as a competitor of the man to whom he sold, provided that such an understanding existed between them. The judge granted the injunction applied for and made it perpetual

General Hospital Opened.—The Omaha General Hospital was formally dedicated and opened January 28. The institution will accommodate 100 patients and has in addition accommodations for friends of patients who may wish to remain. The following have been appointed a staff for the ensuing year: Surgeons, Drs Walter O Henry and Edwin C Henry, attending physicians, Drs Andrew B Somers, H Leroy Crummer, gynecologists, Drs Alvo S Pinto and Benjamin F Wearne, obstetrician, Dr Alonzo E Mack, consulting obstetrician, Dr Joseph C Moore, oculist and aurist, Dr Henry L Burrell, neurologist, Dr Samuel K Spalding, dermatologists, Drs H Clayton Sumney and John W Hellwig, and gastrologist, Dr H L Ahlin

NEW YORK.

To Prevent Marriage of Insane.—A bill has been introduced into the legislature forbidding the marriage of insane, epileptic, imbecile and feeble minded persons. The bill provides that if thirty days before a marriage of persons known to have been in such a state, they shall file a physician's certificate of cure, the marriage shall not be considered illegal. Another measure makes it a felony for any person of sound mind to intermarry or live with such a person or aid in such a marriage. The punishment is ten years' imprisonment or \$1,000 fine, or both

Violations of Pure-Food Law.—Papers have been served on two prominent grocers of Schenectady in civil actions instituted by the so called pure food law. Eight more actions against other grocers will be instituted within a few days. The penalty is \$100 for each offense. The action was brought by a special attorney assigned to the state department of agriculture. Last spring the state commissioner of agriculture sent inspectors all over the state to secure samples of food stuffs for analysis. The results of these analyses were appalling. Eight hundred cases of violation of the pure-food law were sent to the attorney general, who sent them to the special attorneys appointed to the several counties. Owing to the deplorable conditions found, it is understood that sweeping amendments to the pure food laws are to be submitted by the department of agriculture to the legislature for immediate adoption. Under existing laws it is impossible to reach the real offenders, many of whom are outside the state

New York City

New Health Department Building.—Health Commissioner Darlington formally opened the new laboratory building of the department February 9

Microscopes for Columbia.—An equipment of microscopes for the department of physiology has been presented to this institution by Dr David L Haight, a graduate of the medical school in 1864

Reception to Baron Takaki.—After the regular meeting of the New York Academy of Medicine on February 15 a reception to the baron was held, at which he made some remarks on medical schools in Japan

Harvey Society Lecture.—The ninth lecture in the Harvey Society course will be delivered by Prof T H Morgan, February 17, on "The Extent and Limitations of the Power to Regenerate in Man and Other Vertebrates"

Dinner for Hospital.—The committee which was appointed at the dinner for the Manhattan Eye and Ear Hospital last year to furnish a dinner in 1906 has arranged to give this dinner at the University Club, February 20

Low Death Rate.—The death rate for the week ended February 3 was the lowest on record for the corresponding week in any year since the records have been kept being equivalent to an annual rate of 18.1 per 1,000. Last year the rate for the corresponding week was 19.53

Remodeled Willard Parker Hospital Opened.—This hospital was reopened to the inspection of physicians and the public February 9. Among the many new features of the building are the sun parlors on every floor and the thoroughly equipped wards for treating contagious diseases

Contagious Diseases.—There were reported to the sanitary bureau for the week ended February 3 1,489 cases of measles with 52 deaths, 378 cases of diphtheria, with 39 deaths, 343 cases of tuberculosis, with 178 deaths, 208 cases of scarlet

fever, with 7 deaths, 41 cases of typhoid fever, with 3 deaths, 28 cases of cerebrospinal meningitis with 17 deaths, and 180 cases of varicella, a total of 2,607 cases, with 206 deaths.

The Skene Monument—The monument of the late Dr. Alexander J. C. Skene, which is now being erected at the western end of the Prospect Park Plaza, will be completed within six weeks. The monument will consist of a bust on a twelve foot marble shaft, raised against a marble background, which is to bear an inscription telling of Dr. Skene's achievements. The cost of the work is to be \$5,000. This memorial will stand in the most conspicuous position that could have been assigned it in the neighborhood of the park.

Society of Sanitary and Moral Prophylaxis—At a meeting of this society held at the Academy of Medicine, February 8, the question whether instruction in the nature and dangers of venereal diseases should be given to the men of the Army and Navy service was discussed by Col. Valery Harvard, United States Army, and Medical Director George F. H. Harmon of the United States Navy. The question whether the co-operation of the national government should be enlisted on this work was discussed by Dr. Louis L. Seaman.

PENNSYLVANIA

Personal—Dr. Thomas Redding Hathboro, was severely injured by being thrown from his carriage when it was struck by a trolley car, February 3.

More Births Than Deaths—According to the report of the secretary of the Board of Health, Jenkintown, with its 2,500 inhabitants, had only 25 deaths in the year 1905, or one in every 100 population. There were 15 marriages and 42 births.

Free Antitoxin—In the few months that the system of free distribution of the diphtheritic antitoxin throughout the state has been in force, the state's death rate from that disease has been reduced almost 80 per cent. This remarkable reduction in the death rate means that instead of claiming 420 lives out of every 1,000 children or adults afflicted with the disease diphtheria now gets only 88 victims out of 1,000.

Philadelphia

Bequest—The will of the late Adam W. Louth devises \$5,000 to St. Agnes' Hospital for the endowment of a free bed to be known as the "Mary Louth free bed."

Will Keep Cars Clean—The co-operation of the Rapid Transit Company in the crusade for clean and wholesome cars has been promised by the officials of the company. It is stated that they will clean the cars daily and also disinfect them with carbolic acid spray or carbolic acid scrubbing each day.

Society Election—At the general meeting of the Medical Society of the Woman's Hospital the following officers were elected to serve the current year: President, Dr. Frances C. Van Gasken, vice president, Dr. Clara T. Dereum, treasurer, Dr. Miriam M. Butt, and secretary, Dr. Ellen C. Potter.

Dr. Marshall Resigns—Dr. Clara Marshall, who for many years held the chair of materia medica and therapeutics in the Women's Medical College, has tendered her resignation, to take effect at the close of the present session, June 1. She will, however, retain her connection with the college as its dean.

Voodoo Doctor to Hang—The governor has fixed March 26 as the date for the execution of George P. Hooser, a "voodoo" doctor from whom Mrs. Catherine Danz is alleged to have received a powder which is said to have caused the death of her husband. Mrs. Danz was convicted of murdering her husband and was sentenced to be hanged. The board of pardons, however, recommended that the sentence be commuted to life imprisonment.

Hospital Reports—During January 63 patients were under treatment in the Kensington Hospital for Women. The Germantown Hospital admitted 132 and discharged 92 patients. Seventeen hundred cases were treated in the different dispensaries. The Samaritan Hospital admitted 115 patients to the wards and discharged 104. Four hundred and thirty-four new patients were admitted to the dispensaries and 2,048 total visits were made to the different dispensaries.

Personal—Dr. Roland G. Curtin presided at the third annual banquet of the Center County Association at the Hotel Majestic, February 7. Dr. John H. Musser represented the University of Pennsylvania at the annual reunion of the New England Society of the alumni of the university, held in Boston, February 6. Dr. William H. Teller will entertain the Association of ex-Residents and Resident Physicians of the Jewish Hospital at his home on February 20.

Health Report—The total number of deaths reported for the week numbered 584. This is an increase of 13 over those reported last week and a decrease of 28 from the number reported in the corresponding week of last year. The principal causes of death were: Typhoid fever, 29, measles, 20, scarlet fever, 4, whooping cough, 8, diphtheria, 11, meningitis, 3, consumption, 52, cancer, 27, apoplexy, 23, Bright's disease, 73, suicide, 4, accidents, 19, heart disease, 49, acute respiratory disease, 120, enteritis, 29, and marasmus, 2. There were 530 cases of contagious disease reported, with 44 deaths, as compared with 507 cases and 34 deaths in the preceding week. There were 301 cases of typhoid fever, with 29 deaths, or 14 more cases and 8 more deaths than for the previous week.

VIRGINIA

Personal—Dr. H. Ward Randolph of Richmond has sailed from New York for Europe, where he will take postgraduate work.

Smallpox Outbreak—Smallpox has broken out, chiefly among the negroes at Port Walthall, Chesterfield County. The public schools have been closed till all the children have been properly vaccinated. No deaths have been reported so far.

Physician's Tax Abolished—The city license tax on physicians has been abolished by Richmond. The tax was an arbitrary measure varying from \$10 to \$100 per year, based on the supposed prosperity of the physician. The yearly income to the city was about \$4,300.

Physician Assaulted—Dr. J. L. White, one of the leading physicians of Farmville, was murderously assaulted on the night of February 5 when returning from a call. His skull was fractured and his condition is very serious. His assailant has not yet been captured.

GENERAL

Vaccination for the Filipinos—The Philippine Commission has appropriated \$100,000 for the purpose of conducting vaccinations throughout the islands.

Cholera in the Philippines—Dr. Heiser, chief quarantine officer for Manila, reports that cholera is now gradually disappearing from the province of Cavite, and apparently is establishing itself in the province of Bulacan. The bureau of health is following the disease from center to center and promptly stamping it out wherever it makes its appearance. These efforts so far have been successful, in that the disease has practically remained stationary.

Annual Report of Queen's Hospital, Honolulu—The annual report of J. F. Eckardt, superintendent of the Queen's Hospital, contains the following: The number of patients in the hospital January 1 was 47, admitted during the year, 606, total number of patients treated, 653, as against 654 in 1904, 783 in 1903, 752 in 1902 and 817 in 1900. The number of deaths, 42 in a total of 653 patients, gives a percentage of 6.41 per cent, as against 7.8 per cent in 1904, 6.14 per cent in 1903, 6.12 per cent in 1902 and 8.44 per cent in 1901. Of the patients, 171 were natives of Hawaii, 146 of the United States, Porto Rico, 60, Germany, 43, Portugal, 40, Japan, 24, China, 22, Korea, 21, Norway, 18, England, 16, Sweden, 12, Ireland, 8, Scotland, 7, France, 7, Australia, 5, Russia, 5, Argentina, 4, Belgium, 4, Denmark, 4, Italy, 4, Spain, 4, West India, 4, Austria, 2, Canada, 2, Holland, 2, Philippine Islands, 2, India, Guam, Peru, Panama, British Guiana, Martinique, St. Helena and Nova Scotia, each 1. Sixty-two patients were refused admission. Of these 24 were suffering from pulmonary tuberculosis and 9 from other incurable diseases, while 29 were not proper hospital cases, 52 patients, after receiving treatment, left the hospital, and 10 refused to remain, although urged to do so, in 3 emergency cases the patients were found to be dead on arrival, 8 patients were sent to the Home for Incurables, and 1 was sent to the insane asylum. Of the 653 patients treated, 330 were pay patients. The number of patients in the hospital on Dec. 31, 1905, was 56, viz: 15 Hawaiians, 2 Chinese, 2 Japanese, 2 Porto Ricans, 3 Koreans and 32 of other nationalities.

Manila Medical Society Affairs—According to the annual report of the secretary of the Manila Medical Society for 1905, on Jan. 1, 1905, the society had 46 active and 13 associate members. During the year 17 active members were admitted, 2 members have been separated from the society (Drs. Lyons and Miciano), there have been 5 resignations from active and 7 from associate membership and one transfer from associate to active membership. The society consists at the present time of 56 active and 5 associate members. Since its organization there have been 74 active and 15 associate members. Of the active members 12 have resigned, 4 have been separated

and 2 have died. Of the associate 9 have resigned and one has become an active member. The card index of the physicians of Manila has been kept up to date and corresponds with the list kept by the bureau of health. It shows that there are in Manila 230 licensed physicians, and that there are but 153 licensed practitioners of medicine outside the city of Manila. Of the practicing physicians in Manila about one fourth are Americans. The report expresses satisfaction at the increased number of Filipino physicians who have applied for membership in the society, which has on its roll Filipino, German, English, Japanese, Chinese and American representatives. Undoubtedly much interest in the society was aroused by the last annual meeting of the association, and this result is a sufficient reason for the most strenuous endeavors on the part of the members of the society to make the coming meeting interesting. There is great lack of interest, however, in the individual practice in Manila that would be interesting to members, some points in diagnosis or treatment that could be cleared up by discussion. There is a valuable working library in the bureau of science from which much direct and collateral information could be drawn and presented to the society. There is always a chance for research work in the laboratories why the society should not become a great power for good in the Far East, and why it should not be a very influential factor, not only in the dissemination of the facts of medicine in general and tropical medicine in particular, but also in the institution and carrying out of such legal reforms as bear on medical work in general. With the institution of the medical school the society may have a larger sphere of influence. By the promulgation of the principles of medical ethics a great change would be wrought through the rising generation and by taking pains to interest the students in the work of the society, a scientific and useful body of men may be trained to spread clean medical customs throughout the islands. This after all is the most useful function of the best clinics but with the ever present influence of a body of conscientious well trained men quackery may be reduced to a minimum. All this looks forward naturally to the establishment of affiliated provincial societies in order that throughout the islands the same complete knowledge of health conditions may be accumulated. The participation of the physicians of the Army and Navy has been a continued source of pleasure and profit. The permanent resident members of the society appreciate their active assistance. The secretary states that the retrospect is comparatively bright and the prospect brighter. The treasury is comfortable. There should be every hope for continued growth prosperity and usefulness.

FOREIGN

Medical College for Peking.—The Union Medical College, which was established by the five Protestant missions, was formally opened February 13.

Epidemic Cerebrospinal Meningitis in Germany.—The official bulletins state that 61 cases of epidemic cerebrospinal meningitis were reported in upper Silesia in the course of December with 34 deaths. Several cases have also been reported from the Duisburg district.

Successor to Nothnagel at Vienna.—Nothnagel's vacant chair has been offered to Quincke of Kiel and to Strümpell, but each declined the honor. Minkowski of Greifswald and von Noorden of Frankfurt on the Main were then proposed by the Vienna faculty of medicine, and late advices state that von Noorden has accepted.

Approaching International Medical Congress.—The American national committee has sent THE JOURNAL a list of the attending physicians who have signified their intention of attending the International Medical Congress which convenes at Lisbon April 19. The list is a long one and includes many prominent names. See also THE JOURNAL of Jan. 20, 1906 page 207.

International Cancer Congress.—The inauguration of the new Cancer Institute at Heidelberg next September is to be accomplished by an international "congress of cancerology." The local authorities have pledged themselves to support the cancer institute for fifty years. It was erected by popular subscription. Czerny heading the list with a large sum. Nearly \$200,000 has already been raised. As already mentioned, Czerny has resigned his chair of surgery and will devote his energies henceforth to the cancer institute.

Typhus in Mexico.—Dr Hamilton of the Public Health and Marine Hospital Service reports from Laredo that a sanitary campaign is to be inaugurated to prevent the spread of typhus fever in the City of Mexico, where it is assuming a grave character. The disease is practically confined to persons who are unable to travel, and, therefore, is not a serious menace to the United States at present.

A Layman at the Head of the Austrian Public Health Service.—The public health and sanitary service of Austria, since the death of Dr von Kusy, has been placed in the hands of Baron Hein, a lawyer by profession. The Vienna Medical Chamber (Aerztelkammer) has presented a formal protest to the government against this appointment of a layman to a position which above all others requires medical knowledge.

German Congress of Surgery.—The thirty fifth congress of the German Surgical Association will be held at Berlin, April 4 to 7, the date having been advanced a few days so as not to conflict with the International Medical Congress at Lisbon, April 19. The subjects appointed for discussion are "Malignant Tumors," "Surgical Treatment of Gastric Ulcer," "High Rectal Cancer" and a general discussion of Bier's congestive hyperemia in the treatment of acute inflammations.

Cancer Research in Natal.—A local committee has been formed in Natal to co operate with the Imperial Cancer Research Fund. The occurrence of malignant disease among such colored races as inhabit the colony and among birds, reptiles, fish and the lower animals, is being investigated. All physicians and veterinarians will be asked to give their assistance in the work, and an endeavor will also be made to enlist the sympathies of naturalists and sportsmen. The *British Medical Journal* states that all specimens suspected of cancerous diseases are examined, free of charge, at the government laboratories at Pietermaritzburg.

Schaudinn Summoned to Hamburg.—F. Schaudinn of Berlin has been working lately in the Hamburg Institute for Tropical and Ship Diseases, under commission from the Imperial Council of Health. The Hamburg authorities have now decided to invite him to become permanently connected with the institution, the official title of which is the "Institut für Schiffs- und Tropenkrankheiten." He is to be assistant in zoology with a salary of 9,000 marks (about \$2,250), and a pension later. The sum of \$14,250 has been appropriated to enlarge the institute. Schaudinn's fame as an authority on protozoa was so well established that when he announced the discovery of the words of a lesser authority might not have attracted attention for some time.

Reservoir Leakes and Fever in Bombay City.—The Malabar Hill and Bhandarwada reservoirs in the city of Bombay have leaked for some time and the surrounding areas of ground have been sodden and swamped. The Indian correspondent of the *Lancet* states that associated with this condition these surrounding areas have been fever stricken and the corporation has now called for a report. Since 1901 the health department has kept the tanks themselves free from mosquitoes, but the danger covers a much wider area. All the pools, surface collections of water as well as the wells and drains must be treated by an active antimosquito campaign pending the repair of the huge reservoirs. The anopheles mosquitoes have been found in nearly all parts of the city, but the pools and swampy places occasioned by these leakages have been their chief breeding grounds.

Von Bergmann Made Senator for Life.—Kaiser Wilhelm has recently appointed von Bergmann member of the upper house of parliament (Herrenhaus) for life. This is the first time that such an honor has been conferred on a member of the medical profession. Küster of Marburg and Förster of Breslau are members of the house, but were elected as representatives of their university towns. Ernst von Bergmann was born in Russia in 1836, and was professor at Dorpat until invited to the chair of surgery at Würzburg in 1878. He served through the Franco Prussian war and also through the Russo Turkish campaign in 1877. In 1882 he was called to Berlin to Langenbeck's vacant chair, where he has since been. He is one of the publishers of the *Archiv für Klinische Chirurgie* as also of the *Centralblatt* and of the *Sammlung klinischer Vorträge*, and has long ranked as one of the leading surgeons in the world, and as an able writer on surgical topics.

Plague in Japan.—Passed Assistant Surgeon Moore reports from Yokohama that plague continues to prevail in Osaka and Kobe. No new cases of this disease are reported from Shimonoseki, but a doubtful case is said to have occurred in Nara. The authorities are conducting active antiplague campaign.

involving considerable expenditure. In Yokohama conspicuous posters are displayed announcing an increase in the number of prizes in the lotteries held for the benefit of captors of rats. Professor Kitasato recently delivered a lecture in Yokohama on plague prophylaxis, advising the dispatch of Japanese officials to India for duty in the consulates there, for the purpose of strictly examining into the sanitary condition of freight shipped from that country to Japan. In support of his position Professor Kitasato cited the fact that the United States with a view to keeping out sufferers from eye disease requires the medical officer stationed in Yokohama to examine the eyes of passengers before embarkation.

Barbieri Endowment at Vienna.—Dr D Barbieri, who died recently at Vienna bequeathed 300,000 kronen (about \$75,000), to the university to endow stipends for needy medical students at the first and second surgical clinics. Each beneficiary is to receive \$500 a year for three years, the endowment will thus provide for six of these stipends. He qualified his bequest with the condition that it is to be called the "Billroth Endowment" in memory of his beloved chief, Billroth. An obituary notice in the *Wien Klin Wochschr* states that he was known as Billroth's "faithful Domenico," and always accompanied him when Billroth was summoned away from home for important operations. He was his assistant at the famous first resection of the stomach and was also the first to introduce massage into Austria from Amsterdam, where Metzger had revived the ancient art of kneading the tissues. Barbieri was also renowned as an anesthetist, scrupulous of his fame that he had never lost a patient from this cause. He was further distinguished by the fact that he never wrote a line for publication and never occupied an official position, although one of the most popular physicians of Vienna. He was especially skilled in the art of keeping hope alive in the hearts of incurable patients.

Endowment of Medical Institutions to Commemorate the Silver Wedding of the Emperor and Empress of Germany.—Our German exchanges report a number of new medical institutions planned to commemorate the silver wedding anniversary of the royal pair. Berlin has appropriated \$25,000 for a tuberculosis sanatorium and Mülheim and Schöneberg and Salingen have made similar appropriations. Magdeburg has appropriated \$25,000 for a children's hospital and Berlin has made arrangements for a model institution for the scientific study of means to reduce infant mortality. The suburb of Charlottenburg has donated a spacious tract of land for the new institution. It is planned for fifty or sixty beds, and will be divided into a number of departments. Women will be received during the last three months of pregnancy. They then enter the maternity, and in two weeks pass to the mothers' department, where they remain three months. Infants which have to be artificially fed are received into another department to which children from outside are also admitted. A ward for sick children will also be provided, and after the mothers leave the institution they can return for consultation at stated periods. In this latter department, similar to the "infant consultations" of France and the one now in operation in Philadelphia advice will be given to prospective and to nursing mothers, and prizes will be given for nursing, and milk distributed. A model dairy and ample chemical and bacteriologic laboratories will complete the institution. Professor Heubner and the president of the Imperial Council of Health were mainly instrumental in the founding of this model Infants' Home. Vienna has already a similar one on a smaller scale in successful operation. It is the work of a local charitable society called "Infant Protection."

Regulation of Sale of Drugs in Honduras.—Consul Alger of Tegucigalpa reports that there are no regulations or restrictions in Honduras as to the sale of patent medicines. Articles that may be used in pharmacy are specified in the penal code and also the police regulations under which business must be done. Mr Alger sends the substance of these regulations, which follow.

No prescription shall be filled unless clearly written in the Spanish language without abbreviations except those in common use as regards the method of preparation and must be signed by a regular doctor of medicine.

All prescriptions that are filled must be sealed and numbered with number corresponding to that of the register kept by the pharmacist, returning to the interested party the original prescription or a sealed and numbered copy of same.

When in the judgment of the pharmacist a prescription calls for the largest doses of a drug that might be prejudicial in taking he will return the same under seal to the physician who issued it calling on him to accept over his signature all responsibility.

No prescription shall be filled a second time. The physician ordering its repetition shall state how many times repetition is

necessary. The prescription is to be dated each time it is put up, adding initials—Rp-a 1 (recipe ad integrum).

Violation of any of these regulations is punished with a fine of from \$50 to \$500 and closing of the pharmacy in case of further offense. The commission is made up of the inspector of hygiene, one pharmacist and the agent of police to revise the books and to inspect the condition and quality of drugs and medicines. The medical faculty is informed of the result of revision and inspection. The sale of medicines is positively forbidden at any place except at an authorized pharmacy.

Ideals Proposed for the Organized Medical Profession in France.—Julien Noir's article on this subject is quoted in the *Presse Médicale*, No 103, and we translate the latter part entire as his suggestions have attracted considerable attention. "If, as we hope," he says, "this movement for closer organization spreads throughout the physicians of France, the now isolated medical societies, when they become federated or united may be able to play a most important rôle in the future. They will not restrict themselves merely to the defense of the profession and its members, they will form in the body politic a free institution which will, little by little, gradually assume all the official medical functions. A few years ago the authorities of the Lot-et Garonne department placed in the hands of the medical association for that department the entire task of organizing the free medical assistance for the department. This example may be followed by others and gradually the local authorities will give up more and more to the organized profession in the various departments the entire system of free medical aid, even including the hospitals. The French law authorizes the departmental medical associations to give advice to the authorities on matters concerning their profession. What concerns the medical profession is a vast field, embracing all that pertains to hygiene and the care of the sick. The medical associations should be able to reply competently to questions asked them, and they should solicit such questions as occasion arises. The medical associations then will not be mere scientific nonentities whose advice is absolutely disregarded by the authorities when they think to ask for it, they will be powerfully organized bodies which will force the hand of the local authorities by the influence which each one of their members exerts on public opinion. Without dropping into commercialism, the departmental medical associations, with the resources at their disposal, might erect a number of scientific establishments which would facilitate the exercise of their profession and benefit their patients. The local and state medical societies will no longer appear as merely works for timid defense, but will become universally regarded as beneficent institutions, indispensable to the welfare of the public. The physician who holds himself aloof from his confrères under the new order of things will find himself at such a woeful disadvantage to the others that he will haste to join. We recognize the fact that these ideals will not all be realized in our day and generation, but we are certainly beholding the dawn of an evolution of this kind. The premonitory symptoms are already apparent. Medical students used to live apart, meeting only at restaurants and similar public places. Care for the future was the least of their preoccupations. We have seen how in the last few years they have organized into associations for friendly intercourse, and quite recently have taken another forward step in organizing and supporting nobly a professional association, the "Corporative des Etudiants de Médecine," at Paris. The young physicians trained in this new association will bear with them into the practice of their profession a new spirit of organization. The young blood pouring into the local and state medical associations will revivify them, and what we now regard as an impossible ideal will be the practical reality of to-morrow." In France and Germany the physicians throughout the country are officially grouped in regional medical associations called syndicates or medical chambers ("syndicats" and "Ärztelkammer"). These organizations are entirely distinct from the scientific medical societies that may or may not be organized. They are solely for the regulation of matters affecting the profession materially or socially. They have been described more fully in these columns on page 1435 of volume xlii, 1904. The American Medical Association is so broad in its scope that it practically includes all that is meant by these foreign syndicates and medical chambers as well as all the local and general scientific organizations.

CANADA.

Personal.—Dr P H Bryce chief medical officer of the Department of the Interior at Ottawa, is in Vancouver, taking over the Detention Hospital in that city.—Dr Mason W H Pitman, Montreal, has been appointed resident physician at the St Lawrence State Hospital, Ogdensburg, N Y.

Vancouver Association and Patent Medicines.—The Vancouver Medical Association is taking active steps to have legislation passed in British Columbia to regulate the traffic in patent medicines, and will have the hearty co-operation of the secretary of the Provincial Board of Health, Dr C J Fagan, who has been instructed by the government of British Columbia to act in the matter.

A New Dispensary for Women.—A new dispensary for women only was opened in Montreal on February 1. It will be conducted by women physicians. Dr Grace Ritchie England, assisted by Dr Helen Macdonald, will hold a special clinic for diseases of women on Mondays and Thursdays. The clinic will be a free one, but a small sum will be charged for medicines and dressings.

New Medical Society Formed.—The Essex County (Ont.) Medical Association was formed January 26 at Windsor, Ont. Dr James Brien, Essex, was appointed honorary president, Dr Hughes, Leamington, president, Dr Samson, Windsor, vice president, and Dr McKenzie, Kingsville, secretary treasurer. All the physicians in Essex County will be canvassed and an endeavor will be made to unite the entire profession in that county.

Prevalent Diseases.—Typhoid fever is decreasing in Montreal only 18 cases having been reported in the week ending January 27.—There were only 96 cases of diphtheria in Toronto in January, 1906, against 187 in the same month in 1905, 25 of scarlet fever against 48, and 12 of typhoid fever against 14 in 1905.—Smallpox is reported on the Indian reserve near Vernon B C, and Dr Fagan, Victoria has gone to investigate.—There is an epidemic of typhoid fever at Fort William, Ont., and it has been necessary to place from 20 to 30 patients in the contiguous hospital of Port Arthur.—Smallpox of a mild type is said to be present at La Riviere, Manitoba.

For a National Sanitarium.—Lord Strathcona, the Canadian high commissioner in England, has written Dr C J Fagan, secretary of the Board of Health of British Columbia, expressing his willingness to contribute to a national sanitarium, where patients with tuberculosis might be gathered together at some point in Canada most suitable for the purpose. Dr Fagan has been in communication with the different boards of health in Canada and once the health authorities of the respective provinces and the general public evince a desire to participate in such an undertaking the movement will be started and Lord Strathcona would then demonstrate that he takes a lively interest in the tuberculosis problem in Canada.

Hospital News.—The fund of the Toronto General Hospital now amounts to \$1113 886 the County of York, in which Toronto is situated, having contributed \$15,000.—The total number of patients treated in the Winnipeg General Hospital during the week ending January 27 was 360, of these 224 were men 94 women and 42 children.—Grace Hospital, Toronto, admitted 108 patients in January. There were 14 births 11 deaths and 100 patients discharged during that month.—A new ward has recently been added to the Provincial Hospital for the Insane at New Westminster, B C.—The Manitoba government has given a tract of land containing 1,600 acres for the purposes of a consumption sanatorium at Holland, Man.

Quarterly Meeting of the Ontario Board of Health.—The Ontario Board of Health held its regular quarterly meeting, which was also the annual meeting in Toronto, January 31 and February 1, 2 and 3. A resolution was unanimously passed advising the government at once to proceed to the establishment of a department of public health for Ontario. At present health matters are administered under the department of the provincial secretary and the minister of agriculture, although it is hard to understand what a minister of agriculture knows about public health. Drs Kennedy and Oldright the two senior members of the board, were appointed to represent the board at the approaching International Medical Congress at Lisbon.

LONDON LETTER

A New Plague Prophylactic

A preliminary report by Dr Klein to the local government board on a new plague prophylactic has just been issued. Dr Klein found that in animals dead from plague when all the bacilli contained in their organs had been killed in the process of drying emulsions made from the dried material

and injected into mice and rats were capable of causing death within twenty hours, with symptoms like those of acute plague, though after death the tissues did not contain the bacillus. He also found that the injection of an amount of emulsion insufficient to cause speedy death produced an illness from which the animals usually recovered. When these animals were then injected with virulent cultures of the bacillus they proved refractory to infection. He concluded, therefore, that the dried organs of animals dead from plague contain a powerful plague toxin which, in appropriate doses, may serve as a prophylactic. Dr Klein then injected into a series of animals the dried organs (containing organo-toxin and dead bacilli) of various rodents dead of plague with the purpose of ascertaining the protective power of these materials for similar rodents against subsequent infection. Many experiments were made in order to find the best methods of preparing and preserving prophylactic material as well as to determine what portions of the body of an animal dead of plague are the most efficacious. He found that a variety of tissues taken from guinea pigs dead of subacute plague finely minced aseptically, spread out in thin layers, on sterile glass dishes and dried over sulphuric acid at from 46 to 47 C, yield a material which can be rapidly and easily prepared, is of uniform efficacy, and is superior in every way to other prophylactics. A guinea pig yields from 5 to 7 gm of dry powder prepared from the hobo, spleen, lungs and liver. The protective dose for a rat is from 10 to 15 mgm. Three days' drying is more than sufficient to devitalize the bacilli contained in the organs. The dry scales resulting are rubbed down to fine powder in a sterile mortar. The powder is transferred to a sterile wide mouthed bottle plugged with sterile cotton wool, which is kept for two or three days at 37 C to complete the process of drying. The cotton wool is then replaced by a glass stopper and the prophylactic is ready for use. It can be preserved indefinitely in a dry state by a layer of paraffin over the stopper, and when tested by culture is found sterile. In preparing the prophylactic for use it is rubbed down in sterile warmed distilled water and the emulsion thus made is injected subcutaneously. Dr Klein has experimented on several dozen white mice, from five to six dozen guinea-pigs and over 150 rats and finds that the animals are protected against the most virulent bacilli. He concludes that from 5 to 7 mgm of the dry prophylactic would be a proper dose for a man. A large guinea pig dead of subacute plague would yield from 800 to 1 000 human doses—an amount of protective material equal to from 3 to 5 liters of Haffkane's fluid prophylactic. As the latter requires from four to six weeks for preparation while the former requires only from ten to twelve days is produced at a much smaller cost and will keep in the dry state any length of time, the advantages of Dr Klein's method are obvious.

Action Against a Physician for Mistaken Diagnosis

An action for mistaken diagnosis has been taken against a physician under outrageous circumstances. A woman was taken ill and after attending her for some days the physician certified that she was suffering from typhoid fever and she was removed to a fever hospital, where the disease from which she was suffering was regarded as doubtful and the physicians thought that it would take a week or longer to say whether or not she had typhoid fever. They suspected typhoid fever and thought that from the symptoms the patient's physician was thoroughly justified in reporting the case as one of infectious disease and in having the patient removed to a hospital. Ultimately it was concluded that the patient was suffering from influenza. The judge said that the action ought never to have been brought, that the physician sent the patient to hospital for proper treatment, and that she had shown her appreciation by bringing the action against him. He gave judgment against her with costs on the highest possible scale.

The Instruction of Civil Practitioners in Military Work

In any large war of the future recourse must be had to civil practitioners to supplement the army surgeons. Hence the necessity for some system of training in times of peace in military duties. A number of physicians resident in London have expressed their willingness to render assistance in time of war provided they are instructed in the work which they may be called on to perform. A request for such instruction was sent to the director general of the army medical services and he has arranged for a short course of lectures and demonstrations to be given at the West London Hospital on alternate Saturdays at 4 p. m. An attempt will be made to give a broad and practical view of the subject without going much into detail.

Lunacy Action Against Doctors for \$50,000

An action has been brought in Scotland for \$50,000 damages by a Clyde pilot against two physicians. They signed medical certificates in September, 1901 under which he was placed in an asylum for four months. He was discharged as sufficiently recovered in January, 1902 subject to certain precautions. At the trial a large number of lay witnesses testified to the man's sanity before he was placed in the asylum. Two physicians who had not seen him also gave evidence on his behalf. Evidence for the defense was given showing that he was insane and threatened to shoot a friend whom he believed to be criminally intimate with his wife and as to his violence to his wife and son. Not a particle of evidence was given as to any reason for his suspicions of his wife, and his conduct was proved to have been riotous, irritating and dangerous. Both physicians had taken a great deal of trouble with regard to his case. They examined him repeatedly and took every reasonable measure to avoid certifying him—by medical treatment and by sending him to the country. The medical certificates were in proper form, according to the Scottish lunacy law, and the facts indicating insanity observed by both physicians were full and sufficient. On his admission to the asylum the superintendent found him to be insane. Dr. Clouston and Dr. Joseph Bell gave expert testimony as to the sufficiency of the certificates and to the urgent necessity for asylum care in the condition shown by the man on admission both for his own treatment and for the public safety. Judgment was given for the physicians against the plaintiff. The case shows the need of reform of the Scotch law so as to prevent such vexatious actions against physicians who do only their duty. In England such proceedings can be stopped by a judge *ab initio*. The action of the two physicians who gave evidence on behalf of the plaintiff has aroused much indignation and a subscription list will probably be opened to enable the profession to give practical expression to their sympathy with the defendants in the heavy legal expenses to which they have been put through no fault of their own.

School Hygiene

The report of Dr. Niven, health officer of Manchester, contains some important suggestions on the subject of school hygiene. He points out that the education of children must fail unless they are healthy and well nourished, and that from the ranks of the underfed comes the most abundant supply of the vicious and criminal classes. He thinks that a magnificent opportunity is offered to educational authorities for seeing that the health of children is properly looked after, and that this duty is incumbent on them, since on its performance depends the success of the educational system. The first thing necessary is a race of young women who understand in some degree the duties of a wife and mother. A girl should be grounded in certain domestic branches of knowledge before leaving school. She should know how to cook, sew and mend. She should know how to clean a house and the dangers of filth. She should learn how to clean, manage and feed infants and young children. She should know something of infectious diseases and how to act when they occur. All boys and girls should be taught the elementary principles of personal hygiene. Teachers have so many opportunities of observing their scholars at their tasks, physical exercises and games that they ought to be able to perceive when anything is seriously amiss with their health and should call the attention of the medical officer of the school. The teachers should be instructed in these duties by the medical officers, a procedure which is carried out in Manchester. Training in the management of infants and young children might be carried out in crèches, but they are not quite suitable. What is required is a central hall for teaching purposes, with rooms leading off from it. With this school should be associated a museum of feeding appliances and a teaching kitchen. With the school might also be associated a plant for the modification and sterilization of milk. Further control of the rearing of children should be exercised by means of health visitors or lady inspectors.

An Infants' Milk Depot

Dr. Newman, the health officer of the metropolitan borough of Finsbury, has published a highly interesting account of the first year's working of a depot formed under philanthropic auspices for the supply of sterilized and modified milk. The depot was established by the Finsbury Social Workers' Association and by funds privately subscribed. It has been conducted on four definite principles: 1, Absolute control of the milk and avoidance of the blunder of sterilizing unclean milk, 2, medical supervision of the entire management of the depot and of the children supplied from it, 3, a discriminating and careful distribution of the milk to only such infants as could

not be breastfed, and 4, a systematic study of the effect of milk on the children. The first condition was secured by the effective co-operation of the farmer who supplied the milk. The cows, the utensils and the milkers are kept in the cleanest possible conditions. Immediately after milking the milk is removed and strained through a metal screen. It is then cooled in the open air under cover and at once taken to the laboratory, where the cream is separated and three modifications are prepared, adapted to the needs of infants at different ages. It is then poured into sterilized bottles. In winter the bottled milk is Pasteurized at a temperature from 140 to 150 F for twenty minutes, in summer it is sterilized at 212 F for twenty minutes, in midwinter for a period of some weeks no Pasteurization or heating of any kind is done. After Pasteurization the milk is cooled to 53 F by admitting cold water into the sterilizer and is kept at that temperature until the time of transmission by rail. In summer it is kept on ice until it is distributed. The depot has proved of substantial service in reducing infant mortality, but the use of the milk has not afforded complete protection against autumnal diarrhea. Out of 120 infants fed on it 18 suffered from the disease and 5 succumbed. Dr. Newman concludes that the virus of the disease gained access to these infants through dried dust and dirt particularly by the use of "comforters" or dummy teats.

Medical Reciprocity with Japan

At the last session of the General Medical Council, the motion of Dr. Norman that the medical act of 1886 should apply to Japan was carried without discussion. This recommendation of the council was approved at a meeting of the privy council in December last. This will give to Japanese physicians the right to be registered as foreign practitioners in the medical register.

Poisoning by Oil of Eucalyptus

A man, aged 34, died at Derby from an overdose of oil of eucalyptus, a drug which is not generally recognized as a dangerous poison. He sent to a druggist for three pennyworth and drank the whole—six drams—in an equal quantity of warm water. He became unconscious and was removed to a hospital, where he died two days later. Acute congestion of the lungs was found at the necropsy. A coroner's inquest followed and the jury expressed the opinion that eucalyptus oil should be scheduled as a poison.

Pharmacology

No Longer Members of Proprietary Association

The Kress & Owen Company, New York City, ask us to announce that they have resigned from the Proprietary Association.

Not for Honor but for Money

One of our southern exchanges in a recent issue devotes considerable space to defending the nostrum business, proprietors and proprietary remedies. Incidentally, it applies many disapproving adjectives to the Council on Pharmacy and Chemistry of the American Medical Association, to THE JOURNAL of the Association and to the various state journals that have dared to criticize the present intolerable condition of humbug in the business of making and selling "proprietary" remedies. In its opinion "These manufacturers are not in business just for honor and sentiment, but for the money they expect to get out of their products, and for this very reason it is a guarantee that their products will be all that scientific knowledge can produce, for they know that their purity, efficacy and scientific adaptability to the cure of disease will be put to the test by the prescriber," etc. Exactly "These manufacturers are not in business just for honor and sentiment, but for the money they expect to get out of their products," in some cases, by lying and swindling, by fraud and misstatement, by almost every sort of graft known to the "patent medicine" manufacturer and his able "adsmith." They can get more money from their products if they mix acetanilid, soda, etc., and sell it at an enormous profit as a "brand new" chemical than they can if they tell the truth. To find out the truth and to tell it is, in part, the task of the Council on Pharmacy and Chemistry. No honest manu-

facturer who is trying to market an honest preparation in an honorable way need have the slightest fear of injury from the council. Candidly, does it not seem time that manufacturers who conduct their business for money only, and without due regard for "honor and sentiment," should receive some little investigating? Does not the result of this investigation convince one that there is, perhaps, too much graft in the business of foisting nostrums on the medical profession? Shall we try to know the truth about these things, or shall we continue to be humbugged and swindled? Is ignorance "bliss," or is it a condition dangerous to our patients and "blissful" only so far as the interests of the manufacturer are concerned?

Reasons for the Stand Taken by Physicians and by Newspapers on the Nostrum Question.

The fight on the nostrum evil recently inaugurated by the lay press was duly seconded by the National Legislative Council in its meeting at Washington (THE JOURNAL A M A, Jan 20 1906)

The principle of procedure embodied in the crusade now being so ably conducted by Mr Bok, namely, that of uniform legislation in the various states, was specifically indorsed. Attention was informally called at that conference, however, to the well known fact that the active participation of the medical profession would be misconstrued and that efforts would be made by the opponents of the reform measure to show that the physicians were actuated by sinister motives. An example was the editorial which the *Cincinnati Enquirer* recently directed against the bill introduced in the Ohio Legislature. In reply to this editorial the following letter was sent

CINCINNATI, Feb 1, 1906

To the Editor of the *Enquirer*—Your editorial this morning under the caption, "And Why Not?" in opposition to the pending bill to compel the publication of formulae of "patent" and "proprietary" medicines contains two references which call for reply, viz.

1 You say that "if the owners of these medicines are to be required to disclose to the world the secret of their compound, why not the doctors who write prescriptions in the Latin text?" Obviously, to compel one class to give up the secrets of their formulae and protect another in not giving them up is not what President Roosevelt calls the 'square deal'."

In reply it is to be remembered that the prescription of the physician is to-day, under the law, the property of the man who pays for it—in other words, the patient—who is entitled either to retain the original, to make a copy of it himself or to secure a copy from the chemist who compounds it. Prescriptions are, furthermore, kept on file by the dispensing chemist, where they are accessible to all properly interested persons. The trifling circumstance that, for the sake of accuracy and brevity, some, but by no means all, prescriptions are written in Latin does not deprive their owner of a knowledge of their ingredients for if he can not read Latin himself he can easily find some one who can. It follows, therefore, that now under the law physicians do comply with all the essentials of publicity. In view of this fact it becomes obvious that "to compel one class to give up the secrets of their formulae and protect another in not giving them up is not what President Roosevelt calls the 'square deal'."

2 You say, in the next place that "it would appear as if the authors might not have the public welfare so much at heart as some sinister motive not obviously associated with the health of the people."

Your inference, not expressed, but still an inference, contained in this quotation to the effect that physicians are authors of the bill now pending at Columbus is not justified by the facts. This movement comes from the people as distinguished from the medical profession and from very reputable representatives of the lay press as distinguished from both the medical press and that portion of the lay press which sells its space for the exploitation of fraudulent drugs. As a matter of fact, the incomes of physicians are increased rather than diminished by the unrestrained consumption of these spurious "remedies" by the public. This circumstance was recently, on a very conspicuous occa-

sion, hurled reproachfully at the medical profession from lay sources as an explanation of the aloofness of that profession from the present agitation. But to publish the alleged formulae of many of these so called remedies would lead to the exposure of their fraudulent pretensions. This, in turn, would drive them not only from the market but particularly from the advertising columns of certain newspapers. All of which prompts the observation that in opposing the proposed legislation these same newspapers "might not have the public welfare so much at heart as some sinister motive not directly associated with the health of the people."

Trusting that you will publish this communication in the interest of "what President Roosevelt calls the 'square deal,'" I am,

Very sincerely,
CHARLES A L REED,
Chairman of the Legislative Committee of the American Medical Association

Of course, this communication was not published by the *Enquirer*, notwithstanding its assumed devotion to the "square deal."

Death from Overdose of "Patent Medicine"

A correspondent in British Columbia sends us particulars of the following case

A male infant two weeks old died after having been given three drops of a preparation containing opium. The child was apparently suffering from colic and his mother gave him "a few drops (three)" of Chamberlain's Colic, Cholera and Diarrhea Remedy. The mother said that the child had seemed to be in a stupor most of the day. At the inquest the child's father testified that the remedy was given about midnight Saturday night, or early Sunday morning. The child died at 11 p m Sunday. On the label of the bottle it is stated that the dose for an adult is one teaspoonful and for an infant from two to fifteen drops. Dr Fraser, the physician in attendance, testified that fifteen drops would be absolutely fatal to an infant. The coroner, Dr E C Hart, addressing the jury, said

There can be no doubt but that death resulted from misadventure or accident. The jury must find a verdict on the evidence but may also comment on the evidence or make any rider it thinks fit to its verdict. Of course there is much sympathy to be felt for the parents. This medicine like other patent nostrums is sold in drug stores to anyone and everyone, without a prescription. The bottle produced contained eight grains of opium. Without treatment the taking of that amount would be fatal to a man under ordinary circumstances. Eight grains of opium could not be sold by a druggist. It is against the law for a druggist to do so. The patent medicine bottle, however, says nothing about what the nostrum contains. The dose for an adult is given as 1 teaspoonful, and for infants from 2 to 15 drops, which would be one-fourth grain of opium and positively fatal to an infant. Two drops might not be fatal but all we know that this infant received was three drops. Many infants have been poisoned by so small an amount of opium as that in two drops of the medicine. It is what is known as a patent medicine, and we do not know what other things it contains. Opium varies in effect. In making opium preparations the chemist analyzes the opium and if he has a poor specimen of the drug a larger amount is used and vice versa.

Quick medicines are made in an uncertain and irregular style and it is quite possible the bottle of medicine Mr Duncan had contained more opium than ordinarily. On the other hand it may be that the medicine is also standardized so that each bottle holds the same. At any rate, as far as this case is concerned it seems to have been fatal to the child. It is an anomaly of our laws that a mixture of this kind which is positively dangerous may be dispensed while the law is so strict about poisons. This is stated in explanation. You are only required to bring in a verdict in accordance with the evidence submitted as to the cause of death but you have the privilege to add any rider that you may see fit to do.

The coroner's jury brought in a verdict that the child died from the effects of opium contained in Chamberlain's Colic, Cholera and Diarrhea Remedy, given to the child without knowledge of the fact that the medicine contained opium, and that death resulted by misadventure.

A Warning from Fougere & Co

The following letter has been received

W J MORRISON, JR, COUNSELOR AT LAW,
43 BROAD STREET, NEW YORK, Jan 20, 1906
George H Simmons, M D, Council on Chemistry and Pharmacy, American Medical Association, Chicago, Ill

Dear Sir—Messrs E Fougere & Co, of 90 Beekman street, New York City, as agents for several preparations intended solely for the use of the medical profession, and to which certain registered trademark

names have been given, inform me that in the literature relating to these preparations they have given the full qualitative formulae and in many cases the full quantitative formulae and even the *modus operandi* of manufacture.

They have also informed me that your Association proposes to make analyses of these preparations, which, together with certain comment and criticism, are to be published by the said Association.

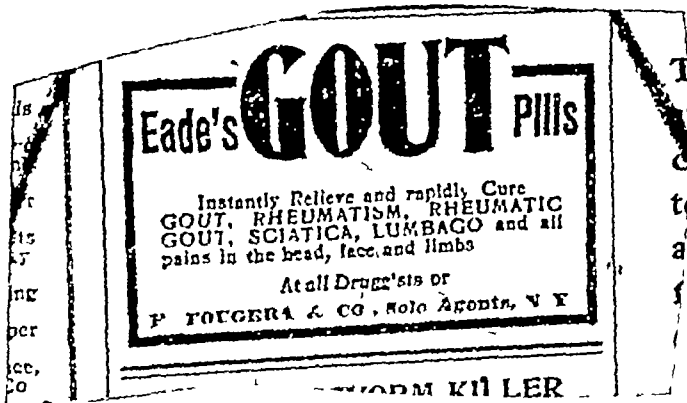
My clients request me to state that they do not desire the publication in the proposed pharmacopeia of "New and Non Official Remedies" of any formulae to which are added synonymous terms stated to be identical with the preparations sold under the trade mark names of the firms they represent as agents, and as counsel for the above firm I wish to warn you against the publication by the American Medical Association or the Council on Chemistry and Pharmacy of any false or inaccurate statements relating to the articles for which Messrs. J. Longera & Co. are the selling agents. Yours truly, W. J. MORRISON, JR.

It is a pleasure to give publicity to the above letter that our readers may know the attitude taken by J. Longera & Co. toward the work of the American Medical Association through its Council on Pharmacy and Chemistry. Since a number of the products for which this firm is the selling agent are already advertised directly to the public, this action is not to be wondered at. We wish to state again that the annual to be known as New and Non Official Remedies is presumed to contain, as nearly as possible only those preparations intended solely for physicians use. J. Longera & Co. therefore, need have no fear regarding the listing of their preparations.



Santal Midy is one of the preparations which Longera & Co. are advertising to the public. This advertisement is reproduced (with out permission) from the Chicago American of Sunday, Feb 11, 1906.

Gonorrhea cured in two days! And this is an ethical proprietary advertised in reputable medical journals!!!



This advertisement, taken from the Chicago Record Herald, Feb 14, 1906, shows another one, there are others but we have no more space to spare at this time.

The Physician and the Pharmacopeia

NEW YORK, Feb 11, 1906

To the Editor — You are certainly aware that I had some thing to do with the present warfare against nostrums. But wholesale indiscriminate denunciation I condemned from the very beginning, and especially have I no sympathy with those who, out of sheer ignorance, try to make a bible, a fetish, out of our Pharmacopeia and want to make it an unpardonable sin to prescribe or to use anything extrapharmacopeial. How absurd this tendency is will be seen from a little illustration in a day's practice of my own. I trust it will be admitted that I know as much about drugs as the average physician and know fairly well what is best for my patient. Well, on looking over today's work I find that I washed out a man's bladder with oxyvanid of mercury, I administered two injections of salicylate of mercury, I prescribed pills of tannate of mercury, I used and prescribed injections of protargol and argyrol, I used eucain as a local anesthetic, and I used several times a proprietary lubricant for the sounds. Here I have used seven different substances, not one of which is official in the Pharmacopeia. Of the seven products, the first three were non proprietary and the other four proprietary. Would anybody have the hardihood to tell me that I should not have used those substances, or that my patients could have gotten along with other agents official in the Pharmacopeia and just as good? No. In the name of commonsense, let us not become hysterical. The Pharmacopeia is a good book, it is a book of standards, but in the very nature of things it can not be a perfect book. It is generally ten years behind the times, and when it does appear it is hedged about with so many restrictions about the admissibility of some of the most valuable of our preparations that the Pharmacopeia can only be an authority as to the preparations which are in it, but it can be no guide as to the usefulness or worthlessness of the preparations which are not found in its pages. WILLIAM J. ROBINSON, M.D.

ANSWER — We do not believe that any one suggests that we should be limited to Pharmacopeial preparations or that the Pharmacopeia contains all that is good. The Pharmacopeia does not include articles that are proprietary in character, consequently the patented products are not found in it, at least not until the patent has expired or is about to expire. There are excellent preparations of this class on the market that will undoubtedly appear in future issues of the Pharmacopeia. Would it not be absurd to say that these preparations must not be used until they are in the Pharmacopeia? There are also excellent non patented pharmaceutical preparations that are a credit to American pharmacy, and yet they are proprietary in character and, therefore, not in the Pharmacopeia. We certainly see no objections to their use. If all proprietary articles are to be condemned, what is the use of the Council on Pharmacy and Chemistry? Are its functions not to examine into proprietary articles and publish a list of those which come up to the standard? Our correspondent, like too many others, has set up a straw man to knock down. We acknowledge that some are using the word "proprietary" in a loose way, but we doubt if any one would suggest debarring all proprietaries. It is the frauds and the fraudulent methods of promotion that are to be condemned.

The Physician Secures the Contempt of the Thoughtful Pharmacist.

Jacob Diner, according to the *Pharmaceutical Era*, has been carrying on a vigorous campaign in New York in favor of the preparations of the Pharmacopeia and the National Formulary, and, before the meeting of the New York County Medical Pharmaceutical League, he recently made some very strong statements concerning the evils that are caused by physician's prescribing proprietary preparations instead of writing prescriptions to fit individual cases. He traces the history of the origin of this flood of proprietary preparations from the time when physicians prepared their own drugs down to the era of elegant pharmaceutical manufacture by well established houses. He says further

"But the human mind was ever so constituted that it could not view success without envy. The success gained by some of the manufacturing chemists by reason of original discoveries immediately brought on such a flood of so called proprietary preparations that pharmacy sank from the position of hand maiden of medicine to that of servant girl of the manufacturer. No professional pharmacist objects to dispensing preparations which are the outcome of discovery or original research. But when he is called on to dispense any of the numberless St. Louis chemicals, when a physician wants him to act as his private dividend developer by dispensing the original discoveries of concerns in which he is interested, then the professional pride of the pharmacist rises up and revolts. In the eyes of the professional pharmacist, the physician prescribing any of these preparations is either an ignoramus or a charlatan, or both, mostly both."

The above language is vigorous. It is worth while to know the frank opinion of the pharmacist, as we have said before, it will be of benefit to us. But Mr. Diner has more to say which it is well worth our while to quote in full.

"With chemicals, even of those protected by patent, which are really scientific discoveries he can easily assume responsibility. Chemical tests are at his command. But what can he do with preparations which never had a chemical test and never could have a chemical test, because they are mechanical mixtures, and because the manufacturers can and do change their composition at will. The M.D. who prescribes these preparations is on a par with the customer who buys Lydia Pinkham's, or Father John's, with this difference, that the layman who takes the statements of the manufacturer for truth pays for it himself, while the doctor makes the patient pay for it and often gets a little rakeoff from the manufacturer in the shape of discount."

"Let us now view the effect which the prescribing of such remedies has on the three classes most affected."

"First comes the physician. After the detail man or the manufacturer's ad has insulted the M.D.'s intelligence by telling him what to prescribe, the manufacturer proceeds to separate the doctor from his patients in a most ingenious manner. He tells the M.D. that to insure the genuineness of the preparation he must write for an original bottle. Right here he undermines his friend, the M.D., for before very long the article has been so well introduced by the aid of the guileless M.D. that the people buy it over the counter without paying the M.D. his fee for recommending it. This is the financial phase for the M.D."

"There is also another phase. When the M.D. has become accustomed to let the detail man think for him, he has given up medicine thinking altogether. His first impulse after diagnosing a case is to call for some proprietary remedy irrespective of what its actual constituents may be, without regard to idiosyncrasies in the patient and without the possibility of knowing what secondary effects that particular dope may produce. Often he is puzzled by what he supposes to be newly developed symptoms, which are nothing less than after effects from some of the constituents of the (to him) unknown remedy. The effect on the patient is a matter not to be lightly passed over. We pharmacists often have occasion to judge it."

I will relate an incident which happened not long ago in my store. A lady brought in a prescription asking for a proprietary tablet whose chemical test consists of the monogram on top. After receiving the medicine she opened the box, and on discovering that the tablets were old friends of hers which she had been buying in 25 cent boxes over the counter, she said some very uncomplimentary things about the M.D., and wound up by declaring that hereafter she would consult a doctor who wrote 'real medicine'. The evil of self-medication is largely due and directly attributed to the prescribing of proprietary preparations by the M.D."

"To compel the druggist to dispense preparations of this ilk is to rob him financially and to insult him professionally. He is compelled to stock up on forty to fifty acetanilid preparations, the numberless bromid mixtures, the legion of dope cure alls simply because the physician is too indolent or too ignorant to compose his own prescriptions."

Mr. Diner certainly makes some very pointed criticisms, but we are compelled to admit that there is a basis of truth for them.

Letters of Appreciation

Dr. J. B. Carrell, Hatboro, Pa., writes

"I have read with much pleasure and profit your department of Pharmacology, and especially the work done by the Council on Pharmacy and Chemistry in

exposing the untruthful methods of patent medicine manufacturers and vendors. I earnestly hope you will keep everlastingly at it, for these gormandizers are barely satisfied with the blood of the innocent babe and helpless old age. Readers of these exposures have had their eyes opened as never before, and the work done by the lay and medical publications deserves the highest praise."

Dr. F. S. Spearman, Whiting, Iowa, writes

"I have derived considerable benefit from the articles by the Council on Pharmacy and Chemistry. It is doing good work for the profession in showing us just what some of these proprietaries are. A case recently occurred in one of my families in which a woman manifested alarming symptoms of collapse after taking the ordinary dose of bromo seltzer. I was enabled to show her what the cause was, and now bromo seltzer is tabooed in that family."

Dr. Max Goldman, Kansas City, Mo., writes

"No one can justly deny the evil consequences of the modern indiscriminate use of patent medicines. The evil exists, however, and a strong reason, in my judgment, is the fact that in the advertisement as well as in the sale of this rubbish there is an enormous profit. We have then to contend not only with the proprietors of the advertising media, but also with the manufacturers and owners of the quack medicines. The medical profession, being of no pecuniary benefit to the public press in most localities, makes its earnest protest to deaf ears when it attempts to convince the newspaper owners of the pernicious influence of such advertisements. Nevertheless, there is every reason to feel that the American people, so ready to learn if proper suggestions are offered them, have already decided against the use of patent medicines, if so, the task of wholly prohibiting their manufacture, sale and advertisement will be much more easily accomplished."

"As regards the part the American medical profession should play in this and similar crusades, it seems to me most natural that the county society should be ever ready to stand as an individual on questions of such vast proportions."

Dr. John Fassett Edwards, Manila, P. I., writes

"Accept my sincere thanks for the arrangement of the matter, and likewise my very hearty New Year's greetings, with particular reference to your most excellent work with regard to the 'patent medicine' evil—it's several steps in the right direction."

Dr. O. P. Voigt, Gillett, Wis., writes

"Keep on with the good work and the medical profession will be something anyway by the time we get through."

Dr. George W. Rall, Pittsburg, Pa., writes

"This is just a word of appreciation, first, for the numerous changes in binding (separate cover, index on and inside cover, number, date and page on edge of cover—all of which makes THE JOURNALS unbound still useful for reference), second, for the thorough, careful, persistent and well thought out campaign against improper proprietaries of all kinds."

Dr. H. F. Curtis, Fiskdale, Mass., writes

"I am glad to see the good work you are doing."

Another Newspaper Speaks Out

In announcing the defeat in the Mississippi legislature of the Lockwood bill, which provided that all proprietary medicines which contain over 5 per cent. of alcohol or a poison should so state on the label, the *Reveille* of Natchez, Miss., says

The death of this meritorious measure was brought about by the patent medicine houses which in addition to their untiring efforts with the legislature whipped the mercenary newspapers into line by threats.

The *Percelle* received a number of these letters all of which, with the exception of one, demanded that the influence of the paper be used to defeat the bill. One telegram ordered that we telegraph the representatives from this county to use their influence to defeat the measure. This paper never expects to sink so low that for the sake of a small money consideration it will oppose a measure which is calculated to result in lasting good to the people of the state and instead of trying to prevent the passage of such a bill when it is again brought up we mean to do all in our power to aid its passage.

Correspondence

Medical Forgeries

KINGSTON, ONT, Feb 10, 1906

To the Editor—In *THE JOURNAL*, February 3, there is an article on "Medical Forgeries," by Dr Van Meter, in which the senate of Queen's University is criticised for not immediately cancelling the degree granted in 1904 to Hagen Burger. In this university, however, the rights of graduates are very carefully safeguarded and so serious a procedure can not be undertaken except on evidence which will hold in any court of law.

In an earlier portion of his article Dr Van Meter writes: "The Colorado medical statute has no provision for the revocation of a license except on the ground of the conviction of the licensee of conduct of a criminal nature." So it is evident that his own state board as well as those of Massachusetts and Montana do not find it so simple a matter to revoke even a license to practice.

The fact is that if the state board of Colorado had done its duty and convicted Hagen Burger of the criminal charge of offering false and forged evidence it would be possible on the presentation of the court record for the senate of Queen's University to cancel the degree. The senate has urged on the state board of Colorado the propriety of going on with the trial as the most direct way to bring the matter to a conclusion. Dr Van Meter makes lame apologies for this not being done but at the same time demands that the university convict Hagen Burger or—he will place certain disabilities on all our graduates who go to Colorado. We rely on the good sense of the profession in the State of Colorado to see that nothing so unjust is done. If necessary the matter will be laid before the Department of State.

It is true that the senate has the matter under consideration. Hagen Burger was summoned and appeared before the senate on December 20, 1905. After a lengthy trial the evidence was considered insufficient to convict and a postponement was advised by our solicitor to secure further information. It may take some time to secure this. Two members of the senate will be in Germany in a few months and they have been asked to secure the evidence desired. The death of Dr Herald, who was secretary of the faculty at the time Hagen Burger was here has added to our difficulty.

Our graduates and friends may depend on everything being done to protect the dignity and honor of their alma mater, and they must be gratified to learn that none of the rights and privileges of any graduate can be lightly revoked.

For their information I desire only to add that Hagen Burger was introduced to the faculty by a physician known to be an honorable man. His name appeared in Polk's register as qualified in Montana and as a graduate of Kiel University. He attended lectures in the session of 1902-3 and failed to pass at the end of that session. He then went to Boston and engaged in practice and was known to be studying there. One year and five months later he returned and then passed the supplementary examinations and was granted his degree.

J C CONNELL,

Dean Medical Faculty, Queen's University

Quinin in Cholera

COLUMBUS, OHIO, Feb 5, 1906

To the Editor—I see in *THE JOURNAL*, February 3, what I have looked for for a generation—some acknowledgment of the truth that quinin sulphate is a specific for Asiatic cholera. In brief, Dr Ussher, a medical missionary at Van, Asiatic Turkey, found himself, about a year since, in the midst of an outbreak of cholera, so severe that in the first week of its prevalence all that were seized with the disease died—100 per cent mortality. On Saturday night at midnight he began to treat the disease according to my directions (10 gr quinin every hour until discharges were controlled), with the result that the mortality fell to less than 10 per cent. Some of your readers may recall that in my article in the *New York Medical Journal*, Aug 18, 1904, I set the necessary mortality from the disease at somewhere between 5 and 15 per cent, when the remedy is given by the mouth (the only way it

should be given), and, preferably, in acid solution or a powder stirred up in a tablespoonful of water, as I gave it during the epidemic in this city in 1873.

The scientific part of Dr Ussher's statement is somewhat obscure. So far as I know, Professor Koch had only demonstrated that in strength of 1/5000 the growth of the spore was inhibited. Dr J C Graham, at that time bacteriologist of Stirling Medical College (now of Denver), at my request undertook further experimentation, by which he demonstrated that in strength of 1/2500 the germ was killed in cultures in a few minutes.

For thirty years I have been drilling into the largest average medical classes in Ohio (save those of one school) that Asiatic cholera is a very curable disease when this remedy in sufficient doses is given by the mouth, that the treatment has been discovered over and over again, that quinin is useless given by the hypodermic and intravenous injection methods, as it escapes by the kidneys, never gaining access to the intestinal canal in any sufficient amount. When your last issue arrived I had an article in course of preparation, but I shall probably now await the news from Turkey in Asia. I have written to Dr Ussher for fuller particulars about the outbreak.

To avoid misunderstanding now or in the future, I wish to state that until after I had used the remedy in 1873 I had never heard of the quinin treatment.

ERSKINE B FULLETON, M D

Trip to Europe After the Boston Session

WORTHINGTON, MINN, Feb 8, 1906

To the Editor—No doubt there will be a number of the physicians attending the annual session of the American Medical Association at Boston, June 5-8, who will sail for Europe at the close of the session. A small party has already been formed to sail immediately after the session, and we would be glad to hear from others who are contemplating a trip, either for postgraduate work or for pleasure. The postgraduate courses in Berlin will be unusually good this year.

HENRY WIEDOW, M D

Association News

A Great Professional Federation

Under the above caption the *Boston Transcript* has an editorial, January 31, on the American Medical Association and on the Boston session that is worth reporting in full. It follows:

The session of the American Medical Association, which will be held in Boston on the 6th, 7th and 8th of June next, is a matter of unusual interest not only to the physicians of the country, but to the whole community. It is forty one years since the last Boston session of this famous organization, and the growth of the Association since 1865 has been notable. Probably no organization of professional men means so much to the community at large. The American Medical Association was founded in 1847, with the declared object of improving the standard of medical education, and by that means of raising the status of the profession, and benefiting the country. While this purpose has been kept constantly in mind, the Association has exerted itself in many other fields. It has effected important reforms in public hygiene, it has impressed on legislators the value of laws relating to the betterment of the condition of the laboring classes in tenements and factories, it has preached the wisdom of a proper medical supervision of immigration, it has urged the supreme importance of healthful surroundings and care for growing children, it has pointed out the dangers and the methods of combating contagious diseases, and in manifold ways it has added materially to the alleviation of sickness, the lowering of the death rate, the suppression of quackery and the prolonging of human life. The means to forward these useful purposes form an interesting chapter in themselves, which we purpose to comment on from time to time.

The actual membership in the Association at present is about 20,000, but this figure by no means represents all the physicians who are brought under the influence of the organ

ization The Association was reorganized on a broad basis in 1902, and the second article of its constitution states that "The object of this Association shall be to federate into one compact organization the medical profession of the United States, for the purpose of fostering the growth and diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the standard of medical education, of securing the enactment and enforcement of medical laws, of enlightening and directing public opinion in regard to the broad problems of state medicine, and of representing to the world the practical accomplishments of scientific medicine" The federating of the medical profession is in large part accomplished This has been done by securing the active co operation of the various state medical societies so as to form an organic whole These state societies bear to the American Association a relation somewhat similar to that borne by the state legislatures to the United States Senate The federated state societies send delegates, who constitute the House of Delegates of the American Association At the same time there are many members of the state societies not members of the American Medical Association, so it is obvious that the House of Delegates represents many more persons than are members of the American Medical Association The total number of American physicians thus actually represented by the governing body of the Association is roughly estimated at about 46 000

It is expected that the coming session of the Association will be the largest ever held Fourteen or fifteen thousand persons will attend, and the physicians of Boston, with the co operation of their New England brethren, are planning an elaborate entertainment suitable to the importance of the occasion, the dignity of the situation and the scientific and hospitable reputation of the city When we look back on Boston's achievements in scientific medicine, and remember the work of New England physicians in the past—that here inoculation for smallpox was independently produced in 1721, that Boston furnished the first physician general in the Revolutionary armies, that in 1818 the office of surgeon general in the United States Army was created for a Boston surgeon, that the vaccination for smallpox for the first time in this country was undertaken here in 1801, that surgical anesthesia was discovered here in 1846, and when we regard the recent work in diphtheria, smallpox, scarlet fever, and in general and orthopedic surgery, the leading position always held by Harvard in medical education, the splendid traditions of our great hospitals, and the famous medical names among us, Boylston, Warren, Waterhouse, Jackson, Holmes, Bigelow, Bowditch, Howe, Homans and many more—when we recall these facts we are justified in a proper pride, and a confidence that the profession and the community will not be found lacking at this time We may be sure that Boston physicians will respond in a way to produce a scientific entertainment of the highest merit, and we have no doubt that our public spirited citizens generally, when called on, will co operate in their usual generous fashion with social and financial aid

Though the meeting is scheduled to last four days only, great numbers of our visitors doubtless will spend many weeks in this vicinity The work of our great public institutions will attract hundreds of thoughtful persons from this country and from Europe, and the charms of New England as a summer resort will induce many to tarry with us beyond the allotted time We feel confident that this meeting will add to the prestige of Boston as the great educational, philanthropic and scientific center of the country

Senn Medal Essay Contest.

The Committee on the Senn Medal announces that a gold medal of suitable design is to be conferred on the member of the American Medical Association who shall present the best essay on some surgical subject. The award will be made under the following conditions (a) The name of the author of each competing essay must be enclosed in a sealed envelope bearing a suitable motto or device, the essay itself bearing the same motto or device The title of the successful essay and the motto or device is to be read at the session at which the award is made, and the name of the successful

author announced (b) All successful essays become the property of the Association (c) The medal shall be conferred and honorable mention made of the two other essays considered worthy of this distinction at a general meeting of the Association (d) The competition is to be confined to those who, at the time of entering the competition, as well as at the time of conferring the medal, shall be members of the American Medical Association (e) The competition for the medal will be closed on, and no essays received after, April 1, 1906 Communications may be addressed to any member of the committee, which consists of the following A F Jonas, chairman, 18 Continental Block, Omaha, J F Binnie, 12th and Wyandotte Streets, Kansas City, Mo, Harry M Sherman, 1303 Van Ness Ave, San Francisco, until April 15, 1906

Marriages

JAMES J MCGUINN, M.D, to Miss Helen Mabel Carroll, both of Chicago, February 14

ADOLPH F MORGENSTERN, M.D, to Miss Alma Doepke, both of Cincinnati, January 31

J CHRISTY CONDIT, M.D, Windsor, Cal, to Miss Bertha Alma of Mentone, Cal, January 27

THOMAS L WILSON, M.D, to Miss Albe M Carroll, both of Piedmont, W Va, January 17

JOHN LEONARD WRIGHT, M.D, to Miss Myrtle Davidson, both of Elbridge, Tenn, February 4

JAMES WILBERT CANADY, M.D, to Miss Jeannette Bay Ferris, both of Indianapolis, January 30

LLOYD RUSSELL MACE, M.D, Philadelphia, to Miss Agnes Biller of Trenton, N J, February 15

HENRY W KRIEGE, M.D, St Louis, to Miss Rose Dorothy Bolm of Warrenton, Mo, February 1

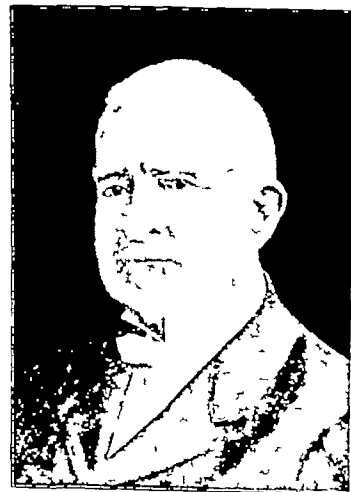
FRANK S BISSELL, M.D, Maple Lake, Minn, to Miss Blanche Stanford of Minneapolis, Minn, February 7

CLARENCE J SLOCUM, M.D, Pleasantville, N Y, to Miss Elvira Gwendolyn Evans of Tottenville, L I, January 17

GEORGE JUSTICE EWING, M.D, Fort Washington, Pa, to Miss Mary E Cross of Fitchburg, Mass, at Trudeau, N Y, January 18

Deaths

Elisha Hall Gregory, M.D, of St Louis, president of the American Medical Association in 1886, died at Ormond, Fla, February 11, from heart disease, aged 81 Dr Gregory was born near Russellville, Ky, Sept 10, 1824 He received his early education in the common schools of Hopkinsville, Ky, and Boonesville, Mo, then studied medicine with Dr F W G Thomas and entered the medical department of St Louis University, from which he graduated in 1849 In 1851 he became connected with his alma mater as demonstrator of anatomy In 1852 he was made professor of anatomy and held this position until 1867, when he was elected professor of surgery When the Missouri Medical College and St Louis Medical College were merged and became the medical department of Washington University, Dr Gregory had a large share in bringing about the consolidation Early in his practice he became connected with the Mullanphy Hospital, St Louis, and for many years was its surgeon in chief He was a member of the St Louis Medical Society and in 1863 its president, and was also at one time president of the St Louis Surgical Society Three weeks



ELISHA HALL GREGORY, M.D

before his death Dr. Gregory went to the South on account of his health, and died there after a short illness.

De Saussure Ford, M.D. Medical College of Georgia, Augusta, 1856, the Nestor of the medical profession of Augusta, surgeon on the staff of General Humphrey Marshall and later in charge of the Third Georgia Hospital, Richmond, during the Civil War, professor of anatomy in his alma mater for seventeen years and then professor of surgery, three times dean of the faculty of the college and occupying that position at the time of his death, one of the founders of the Augusta City Hospital and repeatedly chairman of the governing board, president of the State Medical Association and chief surgeon of the Georgia Railroad, identified in a marked degree with many educational, charitable and municipal institutions of Augusta, died at his home in Augusta February 5 after an illness of ten days, aged 71. At a special meeting of the faculty of the Medical College of Georgia resolutions of respect and regret were unanimously adopted.

Samuel R. Wooster, M.D. Medical Institution of Yale College, New Haven, Conn., 1857, of Grand Rapids, assistant surgeon of the Eighth Michigan Volunteer Infantry, and later surgeon of the First Michigan Volunteer Cavalry during the Civil War, county physician for Kent County from 1872 to 1889, health officer and city physician of Grand Rapids in 1880, at one time coroner of Kent County, a member of the Michigan State Medical Society and a charter member and twice president of the Grand Rapids Academy of Medicine, died at Butterworth Hospital, Grand Rapids, February 5, after an operation for a chronic ailment, aged 75.

Adolph Gustave Brown, M.D. Jefferson Medical College, Philadelphia, 1896, a member of the American Medical Association, the Medical Society of the State of New Jersey, Monmouth County Medical Society and Practitioners' Society of Eastern Monmouth, eye and ear surgeon of the Monmouth Memorial Hospital Long Branch, town commissioner of Redbank, N. J., from 1903 to 1905, designer and inventor of the Redbank sewage disposal plant, died at his home in Redbank, January 21, from cerebral hemorrhage, after an illness of a year and one half, aged 45.

Richard Albert Terhune, M.D. College of Physicians and Surgeons in the City of New York, 1850, one of the oldest physicians of Passaic, N. J., first president of the village of Passaic and twice thereafter holding that position, first city physician of Passaic and first president of the board of health, one of the organizers of the Passaic Medical Society and an incorporator of the Passaic General Hospital Association, secretary of Passaic County Medical Society, 1852-1854, died at his home in that city February 5 from intestinal cancer after a long illness, aged 77.

John Winsor, M.D. Berkshire Medical College, Pittsfield, Mass., 1865, one of the oldest practitioners in the Pawtucket Valley, a member of the American Medical Association, for several years a member of the General Assembly, a surgeon during the Civil War, health officer of Coventry and medical examiner of the first district of Kent County, died at his home in Quiddick, Anthony, R. I., February 1, after an illness of nearly a year from pulmonary tuberculosis, aged 62.

William Edward Swan, M.D. College of Physicians and Surgeons in the City of New York, 1890, a member of the American Medical Association, New York State Medical Association, Medical Society of the County of New York, Medical Association of the Greater City of New York and fellow of the New York Academy of Medicine, died at his home in New York City, February 3, aged 39.

Robert H. Rice, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1893, a member of the American Medical Association, president of the Sandusky County Medical Society and vice president of the Northwestern Ohio Medical Society, the pioneer practitioner of Sandusky County, died at his home in Fremont, Ohio, February 4, aged 68.

John W. Baker, M.D. Medical College of Ohio, Cincinnati, 1883, a member of the American Medical Association, Illinois State Medical Society, Clark County Medical Society and the Aesculapian Society of the Wabash Valley, died at his home in West York, Ill., January 29, from cerebral hemorrhage, after a short illness, aged 54.

Daniel W. White, M.D. Louisville Medical College, 1878, a member of the American Medical Association, Medical Society of the State of California and San Bernardino County Medical Society, died at his home in Base Line, San Bernardino, Cal., January 23, after an illness of several years, from tuberculosis, aged 51.

James Widner, M.D. Medical Department of the University of Iowa at Keokuk, 1864, a surgeon in the Federal service during the Civil War, for twelve years county clerk of Adams County, Iowa, died at his home in Corning, Iowa, January 26, from senile debility, aged 80.

George Archie Stockwell, M.D. Albany (N. Y.) Medical College, 1866, formerly editor of the *Medical Age* and the *Detroit Medical Journal*, and later editor of *Forest and Stream*, died at Houston, Texas, January 28, from cerebral hemorrhage, after a short illness, aged 59.

William M. Hand, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1888, died at his home in Woodstock, New Brunswick, February 10, from streptococcus infection contracted while operating on a patient for puerperal sepsis, aged 42.

De Haven Sharp, M.D. University of Georgetown Medical Department, Washington, D. C., 1904, a member of the medical staff of the Washington Asylum Hospital, died from septicemia at that institution, February 3, after an illness of one month, aged 27.

Lorenzo S. Bartholomew, M.D. University of Buffalo (N. Y.) Medical Department, 1884, of Reading Centre, N. Y., died at the Buffalo Hospital, January 31, from disease of the spine, for which an operation was performed a few days before, aged 49.

Isaac Warren Sawin, M.D. Cleveland University of Medicine and Surgery, 1857, assistant surgeon in the Rhode Island militia during the Civil War, died at his home in Providence, R. I., February 1, after an illness of three weeks, aged 82.

George A. Gordon, M.D. Homeopathic Hospital College, Cleveland, 1870, of Chillicothe, Mo., died at the Women's and Children's Hospital, Kansas City, Mo., January 31, a few hours after an operation for a tumor of the abdomen.

William McKinsey, M.D. Curtis Physio-Medical Institute, Marion, Ind., 1880, a veteran of the Civil War, died at his home in Marion, Ind., January 28, from cerebral hemorrhage, after an illness of two weeks, aged 63.

James B. Littlewood, M.D. University of Georgetown Medical Department, Washington, D. C., 1868, chief of the division of chemistry in the Patent Office, died at his home in Washington, February 7, from heart disease.

Howard Halsey Young, M.D. Bellevue Hospital Medical College, New York City, 1884, died at his home in Riverhead, N. Y., January 17, after an illness of about three weeks, from nervous exhaustion, aged 44.

Joseph G. Grosscup, M.D. Hahnemann Medical College, Philadelphia, 1873, of Reading, Pa., died from cerebral hemorrhage, January 31, in St. Joseph's Hospital, Reading, after an illness of eight years, aged 58.

Reuben F. Parkhill, M.D. Albany (N. Y.) Medical College, 1870, one of the coroners of Steuben County, N. Y., died at his home in Howard, N. Y., January 26, from heart disease, after a long illness, aged 73.

John H. W. Mask, M.D. Leonard Medical School, Raleigh, N. C., 1898, a highly respected colored physician of Wilmington, N. C., died at his home in that city, February 4, after a long illness, aged 32.

Francis A. Payan, M.D. Dartmouth Medical School, Hanover, N. H., 1884, died at his home in Woonsocket, Providence, R. I., January 30, from influenza, after an illness of two weeks, aged 52.

James G. Robison, M.D. Bellevue Hospital Medical College, New York City, 1884, died at his home in Rogers, Ark., from bronchial pneumonia, January 25, after an illness of three weeks, aged 46.

Edwin F. Yohn, M.D. University of Louisville Medical Department, 1895, died at his home in Valparaiso, Ind., from septicemia contracted from a patient, after an illness of three days, aged 42.

John P. Devereux, M.D. Department of Medicine of the University of Pennsylvania, 1896, of Philadelphia, died in the Polychmic Hospital in that city from tuberculosis, February 9, aged 35.

Isaac Jackson, M.D. Jefferson Medical College, Philadelphia, 1847, for more than sixty years a practitioner of Brownsville, Pa., died at the home of his daughter in Pittsburg, February 6.

Charles H. Pierson, M.D. Pennsylvania Medical University, Philadelphia, 1876, died at his home in Avon, Ill., January 25, from pneumonia, after a short illness, aged more than 80.

Fred H. Hunter, M.D. Philadelphia College of Medicine and Surgery, 1860, died at his home in Emmetsburg, Iowa, January 24, from heart disease, after a short illness, aged 57.

FEB 17, 1906

Miscellany

Francis Hamilton Hill, M.D. Medical Department of Columbia University, Washington, D. C., 1849, died at his home in Washington, January 30, after an illness of three weeks, aged 80

Joel K. Van Kirk, M.D. Jefferson Medical College, Philadelphia, 1854, of Elizabeth, Pa., formerly a school director of that place, died at his winter home in Rustis, Fla., February 3, aged 80

George A. Tower, M.D. Boston University School of Medicine, 1877, of Watertown, Mass., died suddenly in Cambridge, Mass., from cerebral hemorrhage, February 3, aged 60

W. H. Miller, M.D. College of Physicians and Surgeons, Chicago, 1893, died at his home in Chadwick, Ill., January 31, from pneumonia, after an illness of one week, aged 45

Isaac S. Meeks, M.D. Medical College of Ohio, Cincinnati, 1850, one of the oldest residents of Troy, Ohio, died at his home in that city, January 31, from senile debility

Caroline A. Risdon, M.D. Hahnemann Medical College and Hospital, Chicago, 1854, died at the home of her daughter in Oakland, Cal., February 1, from pneumonia, aged 68

Benjamin A. Allison, M.D. Jefferson Medical College, Philadelphia, 1844, died at his home in Decatur, Ill., from paralysis, February 6, after an illness of four months, aged 89

John H. Fulbright, M.D. Louisville (Ky.) Medical College, 1880, of Springfield, Mo., died in Los Angeles, Cal., from tuberculosis, after an illness of several months, aged 48

Edward C. Jungbluth, M.D. Omaha (Neb.) Medical College, 1903, coroner of Colfax County, Neb., was killed in a runaway accident near Leigh, Neb., February 9, aged 27

Harry Stites, M.D. Medical Department of the University of Pennsylvania, Philadelphia, 1876, of Harrisburg died in Havana, Cuba, January 25, after a short illness

Edward S. Dalrymple, M.D. New York University, New York City, 1885 died suddenly at his home in Branchville, N. J., February 3, from heart disease, aged 43

Hiram A. Reid, M.D. Iowa Medical College Des Moines, 1883, died at his home in Pasadena, Cal., January 28 from pneumonia, after an illness of one week, aged 71

Elmer Fuller, M.D. Rush Medical College Chicago, 1902, died at his home in Adrian, Mich. from influenza, January 25, after an illness of about one month, aged 43

Walter Wells, M.D. University of Louisville Medical Department, 1905 died at his home in Willisburg Ky., from typhoid fever, February 5, after a long illness

Donn V. Herren, M.D. Missouri Medical College, St. Louis, 1887, of Blockton, Iowa, died at Corning, Cal., February 1, from cerebral hemorrhage aged 46

E. H. Pocock, M.D. Starling Medical College Columbus Ohio formerly of Marshall County Ind., died in Oklahoma City, Okla. January 10 aged 73

Daniel L. Robey, M.D. (Years of Practice, Illinois 1878), died at his home in Stewardson, Shelby County, Ill. January 20 from senile debility, aged 77

George W. T. Hannah, M.D. Vanderbilt University Medical Department, Nashville Tenn., 1876 died suddenly at his home in Thomaston Ga., February 1

Robert S. Engler, M.D. Medico-Chirurgical College of Philadelphia 1901 died at his home in Philadelphia, February 6, from typhoid fever aged 31

George W. Carpenter, M.D. Eclectic Medical College of the City of New York 1887, of Minneapolis, died at St. Paul, January 28

D. Dalton Jacobs M.D. New York University, New York City 1871 died at his home in Willimantic Conn., January 31 aged 66

Vincent Zolnowski, M.D. New York University New York City 1891 died at his home in New York City January 21

S. T. Brothers, M.D., twice a member of the Iowa legislature, died at his home in Malvern, Iowa, January 27, aged 79

The Heart of Neurasthenia.—Dereum says that in neurasthenia the disturbances of the circulatory apparatus consist in modification of the force and rhythm of the heart's action and in the character and frequency of the pulse more or less marked alterations of vasomotor tonus and perhaps the most striking if not the most common symptom of circulatory disturbances is palpitation of the heart

A Problem in Practical Ethics.—The local profession of probably every city in the United States, says *American Medicine*, faces a problem in practical ethics, and in the larger cities this problem is multiplied a number of times. For example. Before his sins—at least before his fellow practitioners have "found him out"—a man gets into the local medical societies and establishes a fair reputation and practice. Soon are told stories, both by patients and physicians, and dark hints, or sorry evidences of trickery appear about the man. It is found that he is playing all sorts of fraudulent games with his patients to make money, he demands visits not medically required so long as the patience of the patient and his pocket book will endure it. He smuggles in an unnecessary operation or two. If the bill is not paid there is a legal suit or a threat of it, until the poor dupe settles as best he or she may, usually paying in full to avoid trouble and to be done with the sharper. Expensive medicines of a peculiar character, or even instruments have, perhaps, also been ordered. There has been little or no cure of the disease and, when possible, there has been only an imagined, or encouraged, sometimes even a diabolically created disease present. The scamp intimidates his patients, gets new ones, heaven knows how, and while growing from bad to worse, covers up his deviltries so deviously that legal proof of unprofessionalism can not be got. His wars become known to censors and colleagues, each shrinks from the danger and odium of exposing him, and so the infamy goes on. The local and the general professional reputation suffers, and the good name of medicine is degraded, while disgusted patients go over to quackery, saying, "These doctors must be much alike, or they'd run such fellows out of their medical societies, or 'show them up' in some way."

Postgraduate Work at Glasgow Royal Infirmary.—The provision for postgraduate clinical teaching has hitherto been very unsatisfactory in Glasgow, says the *British Medical Journal*. That there is a distinct demand for such tuition has been amply demonstrated by the success which has attended numerous courses on ophthalmology during the past few years. These courses are held during the winter months. A further attempt to organize postgraduate courses on a large scale has been decided on by the staff of the Royal Infirmary. With the approval of the managers, the following scheme has been adopted. There will be three courses of instruction in the year, one in winter during February and March, the second in spring in May, and the third in autumn during October and November. The winter course will include special instruction in the following subjects: Diseases of the ear, diseases of the nose and throat, diseases of the skin, diseases of the bladder and kidneys, diseases of women, clinical medicine, clinical surgery, surgical technique, surgical bacteriology, electrotherapeutics and bacteriology. The spring and autumn courses will be on similar lines, and from time to time such other subjects will be introduced as may be found desirable. It is intended to make the teaching as far as possible practical and clinical. There is no doubt that the Royal Infirmary will be an excellent field for postgraduate work. There will be ample clinical material at the disposal of the staff, as, in addition to a very large outdoor department, 600 resident patients are available.

Success and Failure.—Each year hundreds of young men receive their diplomas and are supposed to be ready to attend to the ailments that afflict poor suffering humanity. The *Medico-Chirurgical Journal* says that each of these young men should ask himself what he is going to do with his life. "There are many doctors, who have achieved a high reputation in their profession, who have still made a failure of their lives. Their aims have been low. They have not had a high ideal of their profession, and as a consequence they have missed the better part of life. Mere skill in diagnosis or with the knife does not mean success in the highest sense. It is in the moral sphere that the doctor like every other man gains his greatest success. It is the duty of every man to make the best of what is in him. Unless he works from a sense of duty, in this direction his successes will be merely of a tem-

poal nature He may make a discovery or two in the practice of medicine which are of use to mankind, but he will have left no lasting impression on the world In fact, the world would have been as well off if he had never lived, for some other man would soon have made the same little technical discovery "

Chloroform Death Without Chloroform—Professor Raymond of Paris relates in the *Progrès Medical* for January 13 that when he was a student his professor was lecturing one day on the danger of death from chloroform and how to avoid it, talking over a patient who evidently understood little of the lecture except the words danger and death When Raymond approached to begin to administer the chloroform the patient passed into syncope before a whiff of chloroform had been given, and it was a long time before he could be resuscitated In a recent suit for damages for a death during chloroform administration, it was proved that the patient had been much afraid of the anæsthetic and had said to one of the assistants "You will come to my funeral won't you?" Raymond concludes that death may occur from sheer dread of the chloroform, and that the witnesses of such an accident are not responsible for the fatality

State Boards of Registration

COMING EXAMINATIONS

MAINE State Board of Registration of Medicine City Building, Portland March 17 Secretary Wm J Maybury, Saco
CONNECTICUT Medical Examining Board City Hall New Haven, March 17-18 Secretary, Charles A Tuttle, New Haven
MASSACHUSETTS Board of Registration in Medicine, State House Boston March 17-18 Secretary Edwin B Harvey, Boston

Kansas October Report—Dr T E Raines, secretary of the Kansas State Board of Registration and Examination, reports the written examination held at Topeka, Oct 10-12, 1905 The number of subjects examined in was 10, total number of questions asked, 100, percentage required to pass, 75 The total number of candidates examined was 28, of whom 21 passed and 7 failed The following colleges were represented

College	Year	Per Cent
University of Nashville	(1905)	85
Northwestern University	(1905)	84
Missouri Med Coll	(1890)	77
University of St Louis	(1905)	80
University Med Coll, Kansas City	(1902)	88
Keokuk Med Coll	(1905)	75, 76
Tennessee Med Coll	(1899)	77
Denver and Gross Med Coll	(1905)	88
Hahnemann Med Coll, Kansas City	(1905)	75
Central Med Coll	(1903)	84
Illinois Med Coll	(1905)	85
Meharry Med Coll	(1905)	80
Barnes Med Coll	(1903)	81
Denver Homeo Med Coll	(1902)	82
Hospital Coll of Med Louisville	(1905)	82
Kentucky School of Med	(1902)	75
American Med Coll, Chicago	(1905)	85
Laval University Quebec	(1904)	78
University of Colorado	(1904)	85

College	Year	Per Cent
Hahnemann Med Coll Chicago	(1885)	70
Meharry Med Coll	(1902)	60
Central Med Coll	(1905)	65
Ensworth Med Coll	(1905)	65
College of P and S, Boston	(1904)	65
Starling Med Coll	(1881)	58
Keokuk Med Coll	(1897)	68

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U S Army, week ending Feb 10, 1906

Wilson, William H, asst-surgeon, ordered to proceed from New York City, to Schuykill Arsenal, Pa, on official business
Fauntleroy P C, asst-surgeon, ordered to proceed from Fort Porter, N Y, to New York City and report for duty as surgeon on the transport *Sumner* during its voyage to the West Indies, and on return of transport to New York City, will rejoin proper station

Scott, Geo H, asst. surgeon, leave of absence extended 20 days
Hoff John Van R, asst surgeon general relieved from duty in the office of the chief of staff, to take effect Feb 15, 1906

Morse, Arthur W, asst. surgeon, Baker, Frank C, asst surgeon
Kierstead, Henry S, asst surgeon, advanced from the grade of first lieutenant to that of captain, to date from Feb 4, 1906
The following named officers of the Medical Department, having reported their arrival at San Francisco, Cal, in compliance with orders heretofore issued, are assigned to duty and stations as follows

Corbusier, Wm H, deputy surgeon general, will proceed to Vancouver Barracks, Washington, for duty as chief surgeon, Department of the Columbia
Bloombergh, H D, asst surgeon, will proceed to Fort Leavenworth, Kans
Purcell, Harry S, asst surgeon will proceed to Fort Mackenzie, Wyoming
Morris, Samuel J, asst surgeon, will proceed to Fort Schuyler, New York
Le Wald, Leon T, asst. surgeon, will proceed to Fort Slocum, New York
Swaney, Verge E, asst. surgeon, will proceed to Washington Barracks, D C, and report to the commanding officer of the General Hospital at that post, for observation and treatment
McCaw, W D, surgeon, left Washington, D C, on 16 days leave of absence
Snuddy, Cary A, asst surgeon, ordered to report in person to the commanding officer, Fort Barrancas, Fla, for duty
Smith, L L, asst-surgeon, assigned to duty in the Army Transport Service, and will report to the superintendent of that service at San Francisco, Cal, for duty
Corbusier, W H, deputy surgeon general, granted three months leave of absence
Hoff, John Van R, asst. surgeon general, granted fourteen days leave of absence
Reynolds, F P, surgeon, leave of absence extended fourteen days
Lurnell, Harry S, asst surgeon, granted twenty-one days leave of absence
Lathaway, L M, asst surgeon, ordered to Jeffersonville, Ind, to examine male clerks and stenographers at quartermaster's depot, to determine whether they are mentally and physically qualified for service in the Philippine Islands
Le Wald, Leon T, asst. surgeon, granted seven days' leave of absence

Brechemin, Louis, deputy surgeon general, granted leave of absence for one month, on account of sickness
Murtagh, John A, asst. surgeon in addition to present duties, will take charge of the medical supply depot, San Francisco, Cal, during the absence of Lieut Col Brechemin, deputy surgeon general
Mason, George L, dental surgeon, left Fort Moultrie, S C, and arrived at Fort Oglethorpe, Ga., for duty
Carpenter, Alden, dental surgeon, returned to Vancouver Barracks, Washington, from leave of absence
White, J Samuel, contract surgeon, left New York on transport *Albatross* for Philippine service
Carson, Samuel K, contract surgeon, left New York on transport *McClellan* for Philippine service
Newlove, George, contract surgeon left New York as transport surgeon of the *McClellan*, en route to Philippine service
Long, Stephen M, contract surgeon, when relieved at Fort Duchesne, Utah, ordered to San Francisco, Cal, for Philippine service
Leeper, John F, contract surgeon, relieved from further duty in the Philippines Division, and ordered at the expiration of his present leave of absence to duty at Fort Duchesne, Utah
Hereford John R, contract surgeon, arrived at Fort Moultrie, S C for duty
Tuker, William H, contract surgeon, left Boise Barracks, Idaho on leave of absence for two months
Stucky, Harrison W, contract surgeon, arrived at Fort Assiniboine Mont, for temporary duty
Slevers, Robert E, contract surgeon, returned to duty at Fort Missoula, Montana, from leave of absence
Dillon, G Parker, contract surgeon, left Army General Hospital, Presidio of San Francisco Cal for treatment at Hot Springs, Ark
Hall, Henry M, contract surgeon, arrived home, Cedartown, Ga, for two months' leave of absence
Waddell, Ralph W, dental surgeon, left Fort Leavenworth, Kans en route to San Francisco, Cal, for Philippine service

Navy Changes

Changes in the Medical Corps U S Navy for the week ending Feb 10, 1906

Bertolette D N, medical director, commissioned medical director, with rank of captain, from April 5, 1905
Beyer, H G, medical inspector, commissioned medical inspector with rank of commander, from April 6, 1905
Gardner, J E, medical inspector, commissioned medical inspector with rank of commander, from Dec. 17, 1905
De Vallin, C M, Thompson, J C, and Benton F L, surgeons, commissioned surgeons, with rank of lieutenant-commanders, from March 3, 1903

Garton, W M, surgeon, commissioned surgeon, with rank of lieutenant commander, from March 12, 1903
McCullough, F E, surgeon, commissioned surgeon, with rank of lieutenant commander, from June 9 1903
Furlong, F M, surgeon, commissioned surgeon with rank of lieutenant commander, from June 20 1903
Guthrie, J A, surgeon, commissioned surgeon, with rank of lieutenant commander, from December 15, 1904
Orvis, R T, surgeon, commissioned surgeon, with rank of lieutenant commander, from March 1, 1905
Kerr D B, surgeon commissioned surgeon, with rank of lieutenant commander, from April 5 1905
Angeny, G L, surgeon, commissioned surgeon, with rank of lieutenant commander, from April 24 1905
Hoyt, R E, P A surgeon, commissioned P A. surgeon, with rank of lieutenant, from May 8 1905
Rennie, W H asst-surgeon detached from the Naval Station, Cavite P I, and ordered to the *El Cano*
Dykes, J R, asst. surgeon, detached from the *Baltimore* and ordered to the *Oregon*
DeBruler, J P, asst surgeon detached from the *El Cano* and ordered to the *Oregon*

Dean F W S asst surgeon, detached from the *Frolic* and ordered to the *Oregon*

Grleve C C asst surgeon, detached from the *Oregon* and ordered to the *Frolic*

Steele J M medical inspector commissioned medical inspector with rank of commander from Dec. 16, 1905

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ending February 7 1906

Kalloch, P C surgeon to proceed to Boston and New Bedford Mass on special temporary duty, on completion thereof to rejoin station at Portland Me.

Nydegger J A P A surgeon granted seven days leave of absence from February 6 under Paragraph 191 of the Regulations.

Grubbs, S B P A surgeon bureau letter granting him twenty one days leave from February 2 amended to read twenty one days from February 7

Holt, J M P A surgeon, leave of absence granted for two months from January 15 on account of sickness, amended so as to be effective from January 23

Wightman, W M. asst surgeon granted seven days leave of absence from January 26 under Paragraph 191 of the Regulations

Monoure, J A. acting asst surgeon granted leave of absence for thirty days from February 15

Wakley W S acting asst surgeon, granted twenty five days leave of absence from February 6

Health Reports

The following cases of smallpox yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine-Hospital Service during the week ended February 9 1906

SMALLPOX—UNITED STATES

California San Francisco Jan 20-27, 8 cases
Florida Barberville Jan 27 Feb 3 4 cases Lakeland 3 cases
St. Petersburg 3 cases Seffner 1 case
Georgia Augusta, Jan 22-29 1 case
Kansas In 23 counties, Dec. 131 145 cases
Kentucky Covington, Jan 27 Feb 3 1 case
Louisiana New Orleans Jan. 27 Feb 3 9 cases
Michigan Ann Arbor Jan 27 Feb 3 1 case Detroit, 1 case
Missouri St. Louis Jan 27 Feb 3 1 case
Nebraska South Omaha, Jan 27 Feb 3, 1 case
Ohio Cincinnati, Jan. 28-Feb 2 5 cases
Pennsylvania Altoona Jan. 27 Feb 3 1 case (Imported) Lancaster Dec. 30 Jan. 6 1 case
Utah In 8 counties Dec. 131 111 cases
Virginia Norfolk, Feb 2, 10 cases (at Crane Island Hospital 138 cases)
Wisconsin Appleton Jan 27 Feb 3 7 cases

SMALLPOX—FOREIGN

Africa Cape Town, Dec. 9-16 1 case.
Argentina Buenos Ayres Nov 130 41 deaths
Brazil Pernambuco, Dec. 113 42 deaths Rio de Janeiro, Dec. 24-Jan 7 3 cases 3 deaths
Canada New Brunswick Kings County Jan 29 present
Queens County, present Sunbury County present, Toronto Jan 13-27 3 cases
Chile Antofagasta Jan. 4 26 cases 12 deaths Iquique Dec 24-31 20 cases 6 deaths
China Hong Kong Dec. 16-29, 3 cases 3 deaths Shanghai Dec. 27 present.
Ecuador Guayaquil Dec. 31-Jan 14 9 deaths
Great Britain Bristol Jan 13-20, 1 case 1 death Liverpool 2 cases (Imported)
India Bombay Jan 2-9 6 deaths Calcutta Dec. 16-30 57 deaths Madras Dec. 16-Jan 5 36 deaths Rangoon Dec 16-30 17 deaths.
Italy General Jan 11-18 10 cases
Mexico Tuxpam, Jan 23-30 3 deaths (55 cases and 12 deaths in suburbs to date)
Russia Moscow Dec. 31-Jan 6 10 cases 1 death Odessa Jan 6-13 11 cases, 4 deaths
Spain Barcelona Jan 10-20 6 deaths.

YELLOW FEVER—FOREIGN

Brazil Rio de Janeiro Dec. 24-Jan 7 6 cases 2 deaths.
Cuba Habana, Feb 2 1 case Matanzas Province, Feb 5 1 case 1 death.
Ecuador Guayaquil Dec. 31-Jan 14 13 deaths.
Mexico Vera Cruz, Jan 13-20 2 cases 1 death

CHOLERA—INDIAN.

Philippine Islands Manila Dec. 9-23 3 cases 3 deaths Bula-can Province, Jan. 4 present.

CHOLERA—FOREIGN

India Calcutta Dec. 16-30 129 deaths Madras Dec. 16-Jan 5 13 deaths Rangoon Dec. 23-30 16 deaths

PLAGUE—INDIAN.

Philippine Islands Manila Dec. 16-23 1 case 1 death.

PLAGUE—FOREIGN

Brazil Rio de Janeiro Dec 23-Jan 7 18 cases 4 deaths
Chile Antofagasta, Dec. 20-27 3 cases
China Hong Kong Dec. 16-23 3 cases 8 deaths
India Bombay Jan 2-9 17 deaths Calcutta, Dec. 16-30 33 deaths Madras Dec. 16-Jan. 5 6 deaths Rangoon Dec. 16-30 30 deaths.
Japan Formosa, Nov 24-Dec 31 15 cases 14 deaths
Peru Callao Dec. 21-Jan. 11 1 case, 1 death Chicla Jan 6 present Iima Dec. 21-Jan. 11 10 cases 5 deaths Nueva, Dec. 21-Jan 11 1 death Salaverry Jan 6 present San Pedro Dec. 21-Jan 11, 2 cases 1 death Trujillo Dec. 21-Jan. 11 17 cases 1 death.

Medical Organization

What Can the County Society Do?

VI MEDICAL EDUCATION

Such a topic at first sight appears foreign to the purview of a county medical society, but such is far from being the case. It is generally admitted that there are too many medical colleges, too many medical students, and especially too many physicians whose educational attainments add no luster to the profession of medicine. In great part the remedy for these evils that are so loudly decried by the average medical man is in the hands of the organized profession. Through the Council on Medical Education the American Medical Association is endeavoring by pressure at the top to force all the medical schools to do every part of their duty at a high plane.

While this good work is progressing, the members of county societies have much they can do. In states that have high entrance requirements to medical schools the societies can see to it that they are maintained and enforced. When, as in most states, this stage in evolution has not yet been reached, the societies should work hard to have such a law enacted. After all, few men decide to study medicine who do not consult one or more physicians. In the past it has been the custom of the average doctor to feel flattered that someone else wants to be a doctor, and very often a man ill equipped for medicine has been encouraged into it, only later to fall in defeat before the hard conditions, or else to remain in the guild while lowering its average of ability. That just this phase of the subject is a proper subject for medical society discussion and action is shown by the experience of one county medical society in Ohio—Shelby. For some 25 to 30 years no young man from that county has studied medicine without his qualifications being considered by the society. The result has been few students for the schools, but those few have good educations and have given evidence of possessing some at least of the necessary qualifications. In one generation in a county with no large cities this method of supervision will work a revolution in the character and standing of the profession. As with so many other ill conditions of medical life, a powerful remedy is right within the grasp of the local organized profession—the county medical society.

Material Benefits from Work in County Society

If the energy that is being wasted by physicians in attacking, belittling, slandering and fighting one another were devoted to work, and association in work, we should have a vastly better educated profession, and the public would receive its medical attention from gentlemen very much better qualified to give it. And they would all be better off, financially. Where one finds a small city or town in which the medical men are devoting their superfluous energies to belittling each other, there, as a rule, one finds a community with medical men below the average in ability and in financial standing, patients are being referred to some surgeon or specialist in the nearest large city, instead of being attended by some local man who is quite as good as the city specialist, or might be if he would devote his energies to his own betterment and work in harmony with his fellows.

On the other hand, where we see a similar town in which is a good, active medical society, with all the physicians in the vicinity members of it, where the men are working in harmony, where they are helping each other, where they feel that they may safely leave home from time to time and do systematic postgraduate work, there we find that patients are being referred to local physicians, that different men are taking up different lines of work and are being aided and helped by their fellow physicians. Unfortunately there are too few communi-

ties that have the benefit of a medical profession of this sort; but they do exist, and a few may be found in almost every state in the country. Why are there not more?

Association in Work

The salutary influence of the county medical society can not be overestimated. It is here that association which is lacking in the ordinary course of the day's work may be enjoyed, and acquaintance with the other physicians of the vicinity which is so vital to an honest understanding of one another and to friendly relations may be made. The broadening influence of association, with the exchange of ideas and experiences that follows is the most potent factor in the progress of medicine. To each we may give a little, from each we may learn something. Probably one of the truest words ever spoken was Osler's axiom, "The master word in medicine is work." Without work there is no advancement in educational equipment in professional ability. Without work, constant, steady, never ending work, we stagnate or drop back, and not only are we distanced in the race, but the community—or so much of it as comes under our professional care—suffers, we can not give that, ade of professional service which we should give, we become ignorant.

Just as work is essential to progress, so association is essential to work. Few men have the courage or the ability to work and study by themselves and without the stimulus of association with others similarly engaged. We do not appreciate our own limitations, our own ignorance, actual or relative, until we come into contact with others better educated or better qualified than we are. It should be considered his first and most important duty, by every physician who would deal honestly with himself and with his patients, to attend his county society and to work with his fellow physicians for the betterment and improvement of all. The plan of making each county society a practical postgraduate medical school, as advocated by the Committee on Organization and so ably preached all over this country by Dr McCormack, is a most valuable suggestion. It embodies the two things absolutely essential to progressive medical education and individual improvement, association and work.

Association Achievements Remarkable

Dr D L Wilkinson, Montevallo, Ala, writes "I was a delegate at the Atlantic City session at which were passed the resolutions of reorganization. I was apprehensive. It is with extreme gratification that I now wish to say that I believe we have the best organization in the world. It has already achieved marvelous results and its possibilities are limitless. What it is accomplishing for the physician in a business way, what it is doing through its Committee on Legislation, what it is doing and has done through its Council on Pharmacy and Chemistry, what it is doing to lessen preventable diseases and to protect the public, certainly entitle it to the everlasting gratitude and the unfailing support of every regular physician throughout the length and breadth of these United States."

Society Proceedings

CHICAGO UROLOGICAL AND CHICAGO MEDICAL SOCIETIES

Joint Meeting, held Jan 24, 1906

DR WILLIAM L BAUM, President of the Chicago Urological Society, in the Chair

Syphilis of the Male Genitourinary Tract.

DR HENRY G ANTHONY referred to the discovery of the *Spirochaeta pallida* as the probable cause of syphilis, and said that syphilis is a great imitator of other diseases. As to chancre, physicians are too prone to depend exclusively on the presence of induration in the diagnosis of chancre. They do not

consider other points sufficiently, such as outline, color, smoothness of the base, varnished appearance, etc. For years it has been recognized that it is at times impossible to differentiate between chancre and chancreoid. In Paris doubtful cases are admitted to the hospital and secretion taken from the sore is inoculated into the arm of the patient and covered with a watch crystal. If the ulcer is a chancreoid, a pustule will form in twenty-four or forty eight hours, and microscopic examination will reveal the presence of the Duerrey bacillus. This, he thinks, is a dangerous method and should only be employed on patients confined in hospitals. The base of the pustule should be cauterized immediately.

The diagnosis of a chancre from epithelioma of the penis is at times difficult. Cases have been observed of patients with lesions of the penis which have been diagnosed epithelioma. The penis was amputated, and shortly afterward the secondary eruption appeared. The sudden appearance and rapid development of the lesion should protect the surgeon from this serious blunder. One of the chief difficulties of diagnosis is the fact that epithelioma of the penis is apt to develop in those who have a syphilitic history. In all cases he advises that tissue be excised and examined microscopically before the penis is amputated.

When lichen planus occurs on the integument of the genitals it is apt to assume a circinate form, when it is almost certain to be mistaken for syphilis by the general practitioner.

Syphilis of the testicle in infancy frequently terminates in atrophy. There are two forms of syphilis of the testicle in adult life—sclerosis and gumma. Sclerosis is a hyperplasia of connective tissue which may affect one or both testicles. The organs enlarge to two or three times their normal size, they are very firm and hard, they annoy the patient through their size and weight. Under treatment they subside, but frequently a recurrence takes place if the treatment is discontinued, and after several attacks the condition becomes permanent.

In gumma of the testicle, one or both organs may be affected, and there may be present a single gumma or a number. Traumatism may be the exciting cause. In one of the author's cases the patient fell downstairs and struck his testicle against the newel post. As to syphilis of the epididymis, in the early months of infection six or eight nodules may develop suddenly in the globus major of each side. Later in the disease it may assume the form of a simple inflammation with deposits of plastic material, and disappear under treatment, leaving fibrous tissue.

Cases of gumma of the cord have been reported by Campbell, Goldenberg and others. In a case observed by Verneuil, the tumor was the size of two fists and was diagnosed as carcinoma. Its specific nature was discovered on postmortem examination. Reclus reported a case in which the cord had attained the diameter of a lead pencil, and it was stiff and rigid like a glass rod. In most of the cases the lesion was an almond-sized tumor which had been mistaken for a cyst.

As to syphilis of the penis, a chancre of the meatus produces a ring of cartilaginous hardness surrounding the meatus, which, when seen before the tenth day, can only be detected by palpation. There is no change in the color of the mucous membrane, later the mucous membrane presents a whitish appearance. It is usually accompanied by a discharge from the urethra which contains the gonococcus. The author also discussed scleroderma of the meatus, papular syphilide of the meatus, gumma of the prepuce, cylindroid of the urethra (the rarest of all syphilitic lesions of the genitourinary organs), syphilis of the ureter, syphilis of the kidney, and syphilis hereditaria tarda.

Tuberculosis of the Male Genital Tract

DR ALEXANDER HUGH FERGUSON discussed tuberculosis of the male urethra, prostate gland, seminal vesicles, vasa deferentia, epididymes and testicles. He said that primary tubercular urethritis of penile and membranous urethra is very rare. It is almost invariably secondary, and is a part of urogenital tuberculosis, descending from the kidney, bladder, prostate, vesiculae seminales, vas deferens, epididymis and testicles, more rarely affecting the areas of physiologic dilata-

tion, e g, the prostatic, bulbous and navicular portions of the urethra where urine stagnates. The prostatic urethra is most frequently involved, but the lesions may occur along the entire urethra. Tuberculosis here, as elsewhere, may appear in the form of a miliary tuberculosis, diffuse or clustered, as indolent ulcers, or cheesy infiltrations. The surface often appears diphtheritic. According to Senn primary tuberculosis of the urethra is exceedingly rare, and when it does occur it takes place in a part of the urethral mucous membrane prepared for the reception and growth of the bacilli by some antecedent injury or disease. Secondary tubercular lesions of the male urethra comprise 1 per cent of all forms of tuberculosis and 17 per cent. of all cases of urogenital tuberculosis. Young male adults, subject to or affected with tuberculosis, are prone to tubercular urethritis. Baumgarten's experiments on rabbits are rather convincing that primary urethritis, tubercular in character, may occur by inoculation. In either primary or secondary urethritis of this nature the diagnosis is not scientifically complete without demonstrating the presence of the bacillus of tuberculosis.

In over 100 cases of prostatectomy Ferguson has observed tubercular foci in five cases where tuberculosis was not diagnosed before operation, and only suspected in the last two, owing to their clinical history. The prognosis of the prostatic cases that are obviously tubercular, whether unilateral or bilateral, acute or chronic, primary or secondary, is very grave. The course may be very slow, and it usually is, but the termination is often fatal. The treatment should be constitutional mostly. He performed a prostatectomy on three patients suffering from tuberculosis of the prostate, in what he judged to be an early stage of the disease. Two died of general tuberculosis within a year, the other lived a year and a half, then died of bilateral kidney tuberculosis. A perineal fistula persisted in one case. Ferguson stated that when an abscess forms in the prostate it should be opened in the direction it is pointing, either via the rectum or perineum.

Tuberculosis of the Male Urinary Tract.

DR. ARTHUR DEAN BEVAN said there are three common foci of so-called primary tuberculosis of the genitourinary organs. The term primary must be qualified, although the possibility of a true primary tuberculosis of these organs must be admitted in the sense that the bacilli may gain entrance into the circulation without having lodged at a point where the primary focus is developed and are carried to the kidney or to the epididymis. But such a true primary involvement is rare. In almost all cases of tuberculosis of the genitourinary organs a bronchial or tracheal gland, or some lung or bone tuberculosis is the primary focus. From this focus the tubercle bacilli enter the circulation and then lodge in the kidney, prostate, epididymis, etc. An ascending tuberculosis from the urethra is possible. Bevan thinks that the majority of writers still maintain the view that the epididymis is the common point of infection, but he thinks this view is erroneous. So far as the order of frequency is concerned, he thinks the kidney is the most common point of involvement, the epididymis second, and the prostate third.

The recent work of Semon, Kronlein, Mayo, and the speaker's own has shown that tuberculosis of the kidney, in more than 90 per cent. of the cases, is unilateral, and if the diagnosis is made early, a nephrectomy will frequently clean up the entire picture. Kidney tuberculosis is not very commonly followed by genital tuberculosis. Genital tuberculosis leads to involvement of the vas deferens, the seminal vesicles, and the prostate and bladder. Tuberculosis of the kidney very often runs a silent course, without a symptom. He has operated on a patient with a distinct, definite history of lesion of the right kidney, who before the operation believed herself to be in very good general condition. Nephrotomy of the right kidney showed a large accumulation of pus. From the time the nephrotomy was made not a drop of urine passed through the bladder. There were no symptoms referable to the opposite side at any time, but within a week the patient died. Postmortem examination showed the opposite kidney, which had never given rise to any symptoms, to be a sausage-like structure composed of a dense fibrous capsule, filled with a crescentic mass, without a vestige of kidney tissue.

Such a picture of silent tuberculosis occurs not infrequently. The ordinary symptoms are very similar to those found in several other conditions—stone, malignant tumor, polycystic degeneration of the kidney, pyelitis, and nephropylitis from other germ infections. Blood is a common sign and symptom, also pus. The pain is of two kinds—colicky pain, which simulates closely that caused by kidney stone, rather chronic tenderness and uneasiness, temperature, presence of a swelling. In the advanced cases, where there is present a tubercular pyonephrosis, or perinephritic process, there is no early evidence of swelling. In the advanced cases, again, there is a general picture of tuberculosis, with temperature. The presence of tubercle bacilli is discovered in about one third of his cases. Where the presence of bacilli is not determined the symptoms frequently can not be differentiated from those of stone in the kidney. Here Bevan employs the x ray. If the x ray shows stone, well and good, if it does not, he believes he has to do either with tuberculosis or hypernephroma. If there is no swelling, no enlargement, but temperature, he says, tuberculosis. If there is enlargement and no temperature, with the absence of stone, absence of tubercle bacilli, he says, probable hypernephroma, so that the diagnosis is arrived at in a number of cases by exclusion. Where one kidney is involved and the other is healthy, a nephrectomy should be done, as nephrotomies and resections are not followed by satisfactory results.

DISCUSSION

DR. F. KREISSL expressed himself a little more optimistically than Dr. Bevan relative to the treatment of tuberculosis of the bladder. In many cases he thinks the removal of the kidney, which is the primary focus, may effect a cure of the secondary lesion in the bladder without any other interference. In secondary lesions due to a descending infection he has noticed quite often that certain topical applications to the excoriated bladder cause these ulcers to heal. He does not think that a primary lesion of the bladder, however, can be favorably influenced by the application of iodoform or bichlorid solution.

DR. GUSTAV KOLISCHER said that tuberculous cystitis may exist. Around the ureteral opening there may be a few disseminated ulcers, with undermined edges, and a few gray tuberculous nodules. In such cases favorable results are obtained if the kidney, which caused the descending tuberculosis, is removed. Rosen has recommended the injection of a 5 per cent carbolic acid solution into such a bladder after the kidney is removed. In the case of a young girl on whom Kolischer did a nephrectomy, he found three ulcers. These healed inside of three days after the operation, but whether the healing of them was due to the injection of the carbolic acid or to the removal of the kidney, he does not know. He called attention to the fact that quite often the first symptom of kidney tuberculosis is frequency of urination. These patients, often without further examination, are treated by different methods, the urine not being examined. In young women, where the bladder is extremely tolerant, tuberculosis may exist for any length of time without causing serious symptoms.

DR. FERGUSON said that he has done nephrotomy in 12 cases, but had to remove the kidney later.

DR. BEVAN emphasized the point that tuberculosis of the kidney very frequently is primarily unilateral, and that the lesser operations of nephrotomy and resection can not be relied on, that the weight of evidence would seem to be in favor of a radical operation where an early diagnosis is made and the existence of another healthy kidney is determined.

WEST PHILADELPHIA BRANCH PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held Jan 12, 1906

Acute Tetanus with Recovery

DR. GEORGE ALEXANDER KNOWLES reported the case of a boy 9 years of age, who received an incised wound of the left leg below the knee. The wound was cleansed and dressed with a bichlorid dressing and closed with four sutures. The edges did not unite and suppuration appeared. After several days the stitches were removed, the wound cleansed with bichlorid and peroxid and a 50 per cent solution of carbolic acid in

glycerin was applied. Eight days after the accident the boy complained of painful swallowing, and the corners of his mouth became depressed. Bromid and chloral were immediately administered, but the symptoms increased, and in addition there was a slight twitching of the muscles and the jaw almost became locked. Tetanus antitoxin in doses of 30 cc was given hypodermatically twice daily for eleven days, in conjunction with bromids and chloral, and when the pulse was high and irregular, 5 gtt. of tincture of digitalis were given per rectum. On the thirteenth day, muscular rigidity having become constant, with convulsive seizures, opisthotonus and pleurothotonus, a lumbar puncture was made and 1 dram of antitoxin in 1 dram of normal salt solution was injected. The temperature rose to $101\frac{3}{5}$, but after about four days returned to normal. Food and brandy were given per rectum during the progress of the disease, and saline solution was administered in the same way in order to supply the system with water, as any attempt at giving water by the mouth produced convulsions. The pulse and respirations during the course of the disease were as high as 160 and 52 per minute respectively. On the fourteenth day the convulsions became less and finally ceased, although the muscular twitchings continued for several weeks after the patient was out of bed. They have now ceased entirely and the patient has made a good recovery.

DISCUSSION

Dr W S NEWCOMB stated that at one time he felt that some of the deaths from tetanus were due to overdugging, and he decided to make sure that this should not be the case with the next patient. The patient on whom treatment was undertaken with this theory in view seemed to be progressing very nicely for several days, and one morning on going to the ward before breakfast, Dr Newcomb learned that the patient had not had a convulsion during the night, but on returning to the ward after breakfast, he was informed that the patient had suddenly had a convulsion and died.

Dr C B LONGICKER said that a man who ran a splinter of wood into his hand was first seen in the early stages of tetanus, and was immediately sent to the hospital and large doses of tetanus antitoxin were administered. At the end of ten days the spasms ceased and he was thought to be on the road to speedy recovery, when shortly afterward he relapsed into unconsciousness and died.

Dr KNOWLES stated that 720 cc of antitoxin were given to his patient and that the child had entirely recovered.

Modern Treatment of Wounds of the Anterior Segment of the Eye

Dr JAMES F PRINDEGAST stated that one of the important features was asepsis. Careful examination, with a good light, should be made and if there is redness present, the character and situation should be noted, as these are important diagnostic aids. Injuries of the lids are usually marked by free extravasation of blood, and cold compresses should be applied, if the case is seen early. If these do not accomplish the desired result, hot compresses, massage and sometimes a leech are of value. Lacerated wounds should be cleansed carefully and the edges brought together accurately to prevent deformity. Puncture wounds should be examined with great care to ascertain if there is any injury of the deeper structures, and if there is much reaction, septic washes should be applied. Burns, if external, should be treated the same as burns of any other part of the body, and if there are granulating surfaces, they should be protected with rubber or other tissue to prevent their growing together. Lacerations of the conjunctiva should be brought together with fine sutures, the edges carefully cleansed, foreign bodies picked out with sterilized instruments, and if the lacerations are painful, a drop of cocain solution may be instilled. In burns of the conjunctiva, especially time burns, he deems thorough flushing advisable. To alleviate pain, cocain solution and cold compresses were advised, and for the stimulation of healing hot compresses were recommended. Foreign bodies should be removed from the cornea and in many cases a drop or two of atropin is of value. Burns of the cornea should be treated by thorough cleansing of the eye and the application of cold compresses for a short time.

Syphilitic Complications of the Nose and Throat

Dr A B KIRKPATRICK stated that it is very difficult to make a diagnosis of syphilis of the nose and throat in the primary and early secondary stages without inspecting other parts of the body. Suspicious cases should receive a careful examination of the tongue, hard and soft palate and throat. In the early cases there may be no history and no scars, and the vagaries of the specific infection are so irregular that even the most astute clinician may be mistaken. The secondary lesions of the throat occur most frequently in the following localities: tongue, lips, soft palate, gums and uvula. In the tertiary stage the diagnosis is more easily made, a symptom that is absolutely diagnostic being an erythematous eruption. In the treatment of syphilis he urged securing the confidence and co-operation of the patient and the necessity for continuing treatment for a sufficiently long period.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Pneumonia

In an article in the *St Louis Medical Review*, L Litchfield, in speaking of the treatment of pneumonia, states that the patient should be supplied with plenty of fresh air without draughts. All unnecessary persons should be excluded from the sickroom. At the onset of the disease the digestive tract should be thoroughly cleansed by calomel or a saline purge, and water should be given freely and forced, if necessary, in the delirious patients, by high saline enemata and by hypodermoclysis. If the pain is very severe, codein or morphin combined with atropin may be used very sparingly hypodermically. If the blood pressure is high, with a hard, full, bounding pulse, bleeding may be resorted to. In other instances, aconite or veratrum viride with active catharsis and icebags to the head and chest may accomplish the same effects. When the patient is delirious, in order to guard against any possible accident he should never be left alone. As regards the diet, Litchfield recommends that the nourishment be very sparingly given during the initial stage, and states that it should be simple and easily digested, as fermentation is liable to occur in the intestine, and thus produce a very serious complication. For the reduction of temperature he recommends sponge baths or packs. The heart must be carefully examined, and with an exaggerated second pulmonic sound strychnin should be administered, and if the pulse becomes irregular or intermittent digitalis should be used. Litchfield recommends alcohol in the form of whisky or brandy, both as a stimulant and as a food, taking the place of fats and carbohydrates. He prescribes it especially when the pulse reaches 120, and if the amount given should show its effect by being eliminated through the respiratory tract, he recommends that it be diminished. If a collapse is threatened, with accompanying cyanosis, a hot mustard bath or hot pack should be employed, with the free use of stimulants hypodermically. Hot baths and packs are used also when extreme nervousness is present. After the crisis has taken place, or in cases of delayed resolution, he increases the diet by giving eggs, chops and steaks, which may be continued steadily unless there is an evidence of the recurrence of temperature.

Mumps

Mumps, as a rule, require but little treatment, especially in children. In grown individuals, however, considerable discomfort may arise, and occasionally the patient may suffer a great deal of pain. In some cases it is necessary to institute an active line of treatment, in order to keep down complications. The patient should be put to bed and placed on a restricted diet.

According to the *Medical Press*, an instillation of the following may be used locally for its disinfecting purposes:

R Menthol gr viii 50
Liquid petrolati 3i 30

M. Sig To be instilled into the nasal passages two or three times a day

As a gargle the following combination is recommended

R Thymol 5ss 2
Menthol gr xv 1
Alcoholis 3iv 120

M. Sig Ten to fifteen drops in half a glass of water as a mouth wash and as a gargle

If the fever should be of any consequence, warm baths are recommended and a preparation of quinin given internally. The following combination may be given

R Quininae hydrochloratis 5i 4
Syrupi idae 3i 30
Aque 3ii 60

M. Sig Two teaspoonfuls three or four times a day for an adult

Otalgia and orchitis are the two most frequent complications of epidemic parotitis, consequently when severe earache is present the tincture of opium, a few drops on a small piece of cotton wool, and applied locally in the external ear, will usually suffice. Locally over the infected glands the following combination is recommended to relieve the pain and to cause the swelling to subside

R Guaiacol 5ss 2
Spiritus chloroformi 3i 4
Lanolini 5ss 15

M. Ft unguentum Sig Apply to the parotid region, and cover with cotton and oil silk

If orchitis should arise poultices are recommended, which should be changed every two hours, and when the pain has sufficiently subsided an ointment similar to the following may be applied

R Guaiacol 5ss 2
Extracti belladonnae gr v 30
Lanolini 3i 30

M. Ft unguentum Sig Apply locally

The Bromids

In his experiments on animals, F. Carteris of Glasgow University, in an abstract in the *Critic and Guide*, states that ammonium bromid is more toxic than sodium bromid, and that with large doses the predominant action is due to the ammonia, and that with repeated non toxic doses the effects of the bromid may be obtained. In the author's opinion, ammonium bromid is not an eligible compound, because the bromid action is only evident after prolonged administration, while the stimulating action of the ammonium is produced rapidly, but passes off within an hour. As regards the action of the potassium and sodium salts, which, according to general opinion, is about the same, with either, Bernard regards potassium as three times as toxic as sodium, and states that consequently it has a much more depressing effect on the heart. Distefano makes a statement which counteracts this general opinion, by saying that potassium salts, instead of weakening the heart, stimulate it, and according to this writer's opinion, the potassium salts are preferable to the sodium salts. The sodium salts remain in the plasma and tissue spaces, while the potassium salts penetrate into the tissue itself and into the protoplasm, and as a proof of the greater efficacy of the potassium salts, he mentions the universally admitted superiority of the iodid of potassium to that of sodium in the treatment of syphilis.

Rectal Atony

In the treatment of defective muscular power of the rectum Bodenhamer, in the *New York Medical Journal*, states that the first consideration should be the observance of strict and regular habits regarding the daily evacuation. This may be assisted sometimes by the injection of from a half to a pint of cold water, at a regular time each day. As cold is tonic, stimulant and astringent, it acts somewhat similarly to nuxvomica, by exciting the sensibility and contractility of this portion of the bowel. In more obstinate cases, however, Bodenhamer recommends nuxvomica as the best remedy, given alone or combined with other preparations. Drastic purgatives should never be used, and the smallest dose of an

aperient should be given so as to arouse gently the normal peristaltic action, and this aperient should be continued only until the daily habit of evacuation is established.

With regard to the ingredients composing an astringent and tonic injection, to be used locally in the treatment of atony of the rectum, this author states that the amount should not be more than five or six ounces, and should never be administered until the rectum has been thoroughly emptied of its fecal contents by a proper enema or aperient. This astringent injection should be given once daily at least, and instructions should be given the patient to retain it for a few minutes, if possible. In obstinate cases, a half to a grain of nuxvomica may be added to this injection. He recommends for injection the decoction of galls as well as a strong decoction of white oak bark and alum. The following combination is also recommended by him

R Acidi tannici gr xxx 2
Vinum rubrum 3iv 120

M. Sig For one injection

He quotes the following combination as being recommended by Trousseau, as one which not only restores the organ to its normal action, but which will also cure anal fissure, if present

R Extracti rhatany 3ii 8
Alcoholis 3v 20
Aque dest., aa

M. Sig For one enema

In some cases the following pill or one with a similar combination is recommended, especially if the atony of the cecum exists with that of the rectum, in order to excite the peristaltic action in those parts which can not be properly reached by an enema

R Ext aloes gr xxx 2
Ext nucis vomicae gr xx 1 30
Ext hyoscyami gr xv 1
Ferri sulphatis gr x 65
Olei caryophylli m v 30

M. Ft pillula No xxx. Sig One pill at bedtime

In the treatment of ordinary cases of atony of the anal sphincters, the cold water douche is recommended, applied rather forcibly for four or five minutes directly after each evacuation of the bowels. The following ointment or lotion may be used with advantage in such cases

R Strychninae sulphatis gr x 65
Ung aqua rosa 3i 30

M. Sig Apply a small amount locally Or

R Ext nucis vomicae gr viii 50
Alcoholis 3ii 60
Aque ammoniae 3i 4

M. Ft lotio Sig Apply locally

Medicolegal

Court May Compel Re-exhibition of Person.

The Supreme Court of Texas has held that, where a party has not voluntarily exhibited his person to the jury, a court has no power to compel him to do so. But, in *Houston & Texas Central Railroad Co vs Anglin*, a personal injury case brought by the latter party, it reaffirms the rule that, where a party has once exhibited his person to the jury to show the extent of his injuries, he may be required during the course of the trial to re-exhibit them. In this case the trial judge refused to compel the plaintiff, who had given testimony in his own behalf, and during the course of his examination had voluntarily exhibited his breast to the jury, to again exhibit it to a physician who was a witness for the defendant. The physician had testified that he examined the plaintiff a short while after the accident, and that his breast was then deformed, and it was proposed to show by the witness, after examining the alleged injured part of the plaintiff, that the same condition which existed at the time of the trial existed immediately after the accident. The court holds that the ruling of the judge refusing to compel the re-exhibition constituted reversible error. It says that if the plaintiff had been compelled to exhibit again his breast in the presence of the physician, and the latter, after examining, had been enabled to say that he

saw no difference between its condition at such time and what it was at the time of the accident, the testimony would have been material.

Opinions as to Causes—Failure to Obtain Medical Aid

The Supreme Court of Missouri Division No. 1, says, in the personal injury case of Glasgow vs Metropolitan Street Railway Co. that it was competent for the medical witnesses to state what cause or causes might produce such a result as that in question (apparently a displacement of the womb), and that both of them did without objection, stating that such a fall as claimed could produce it, and that there were many causes which would produce the same effect. But it was incompetent for them to say that in this case the plaintiff's condition was in their opinion, the result of the alleged fall. It was competent for them, in giving their opinions, to speak of that which they knew from their scientific learning and experience. It was not competent for them to draw conclusions of facts from the evidence in the case. There are cases in which a physician or surgeon may give his opinion, not only as to what might produce a given result, but also as to what in fact did produce the particular result in hand. But such are cases where no other cause could reasonably have produced the effect. Instances of this kind are found in murder cases where the cause of death is the question. A dead body is found floating in the river. To the eye of the casual observer it is a case of drowning. But a man of science makes an examination and testifies that the condition that would result from drowning is absent but the condition resulting in death from poison is present, and no other cause that could produce death appears. Therefore, he may say it was a case of death by poison. Perhaps even in such case it would be more correct to limit the expert testimony to a statement of the scientific facts, leaving the inevitable conclusion to be drawn by the jury. But when after the scientific facts are proven there is but one conclusion to be drawn, it is not harmful error to allow the witness to state his conclusion. But such is very different from the case at bar, where the witnesses said that many causes produced a like result, and they did not say that one was even more probable than another.

Then the defendant contended that, if the plaintiff suffered the fall she claimed she did, it was her duty to have exercised reasonable care in seeking medical or surgical aid, and that, if she neglected to do so and thereby her injury was aggravated, she was not entitled to recover for the aggravated injury. The court says that this was a correct proposition of law. The law on this subject is treated by the law writers under the head of contributory negligence, and the distinction is drawn between contributory negligence which defeats the action, which is negligence which contributes to the happening of the accident, and contributory negligence which occurs after the accident, but which increases the suffering. In either case, before the action can be defeated or the measure of damages curtailed, the plaintiff must be shown to have been guilty of negligence which contributed to the result. The law did not in this case unconditionally demand of the plaintiff that she obtain surgical aid, or charge on her the consequences of failure to obtain it, because that might have been beyond her power. But it demanded that she use reasonable care to obtain such aid, and it withheld from her the right to recover for what she may have suffered in consequence of her failure to use reasonable care. She did not seek medical aid until thirteen months had passed, and her physicians testified that the probable effect of failure to obtain such aid was an aggravation of the affliction. The reason she gave for her failure to call a physician was that she had no means to pay him, and that she did not apply to the defendant company in the trouble because she hoped all the while she would get better. Whether that was sufficient to acquit her of negligence was a question for the jury.

Practicing Without License—Statute Construed

The Supreme Court of Minnesota holds, in the case of State vs Oredson, that section 7896 of the General Statutes of Minnesota of 1894, imposing a fine or imprisonment, or both, on anyone practicing medicine without a license, is to be liberally construed, so as reasonably to effectuate its purpose, to

prevent frauds, and to conserve the public health. That an unlicensed person has practiced medicine is the gist of the misdemeanor, and not a gratuitous incident to it. That such person has for a fee prescribed any drug, medicine, or other agency for the treatment of disease is one kind of evidence of guilt, and not the exclusive substance of the offense. The mere fact of graduation from a medical college does not entitle to practice medicine in Minnesota. The offense defined by statute may be committed by a graduate of a medical college, as well as by any other person not licensed to practice medicine, who is not shown to be a medical student practicing under the direction of a preceptor, or not then and there being a physician or surgeon of the United States Army or Navy.

The definition of practicing medicine given on the trial of this case was in accordance with the statute, as follows: "Any person shall be regarded as practicing medicine within the meaning of this act, who shall append the letters 'M.D.' or 'M.B.' to his or her name, or for a fee prescribe, direct or recommend for the use of any person any drug or medicine or other agency for the treatment, cure or relief of any wound, fracture or bodily injury, infirmity or disease, and there is a provision that this shall not apply to dentistry." The act, the court says, is a beneficial one, and is entitled to a liberal construction. Its purpose was not, as the counsel for the defendant insisted, to merely make prescribing for a fee the offense, so that the defendant could have practiced medicine generally, could have held himself out to the world as a physician and surgeon, could have examined patients, and inferentially could have operated on them as a surgeon for pay, and yet would not have been guilty of a misdemeanor within the meaning of the act. On the contrary, its plain object was to prevent the public wrong of practicing medicine without a license.

The act, the court continues, was not enacted for the benefit of any profession or of any school or theory of medicine. It was designed to secure the public in whole and in every part from quacks, humbugs, and charlatans masquerading under the venerable and honorable titles of surgeons, physicians and doctors, and to protect the public in a just reliance on the one using these titles as a man of proper education and sufficiently trained in the sciences involved. A just enforcement of that act would tend to prevent the most deplorable swindling of the ignorant poor, who can least afford to pay for the luxury of deception, and who are the most likely to be the dupes of ostensible practitioners, whose competency has not been determined by law, and whose moral deficiencies are evidenced by their false pretenses. Its terms should be construed, so far as reasonably may be, so as to tend to eliminate the suffering of an individual from the misuse of inert drugs when potent ones are needed, and of powerful agencies productive of ill where proper ones might bring relief or effect a cure, so as to avoid many evils of malpractice, and so as to minimize the exposure of the community at large to the spread of avoidable pestilence. The act is at once a statute of frauds and a health ordinance.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

February 3

- 1 *Readjustment of Education and Research in Hygiene and Sanitation. W. T. Sedgwick, Boston.
- 2 Problem of Psychiatry in the Functional Psychoses. E. Cowles, Boston.
- 3 *Observations on Albumoses in Urine. W. P. Elmer, St. Louis, Mo.
- 4 Roentgen Rays in External Treatment. M. B. Hutchins, Atlanta, Ga.
- 5 *Influence on Native Population of the Event of the Tuberculous. C. F. Gardiner, Colorado Springs, Colo.

1 Hygiene and Sanitation—Sedgwick would have sanitation mean the care of the environment (streets, water, milk supplies, sewerage, etc.), and hygiene chiefly the care of the per-
sons or groups of persons (feeding, vaccination, personal hygiene, etc.) The latter would then belong largely to medical men or physiologists, the former to sanitary biologists, chem

ists and engineers. He laments the small attention paid to hygiene and sanitation, alike in medical schools and in schools of engineering, and looks for a remedy partly in the better definition and separation of these subjects, and partly in the establishment of permanent well paid positions for trained men in the public health service—which should at the same time be made more general and less local. Sedgwick concludes his paper as follows: Politics must also be wholly eliminated from our boards of health, both state and municipal. There is no republican method of vaccination, no democratic plan of street cleaning. Places on boards of health must not be used as rewards of political activity. The time—if it ever existed—has gone by when a good board of health can be made up of a political doctor, a political saloon keeper and a political nobody, for no well trained and self respecting expert in hygiene or sanitation can or will remain in the dubious and uncertain service of weak, incompetent or shifty characters.

3 Albumoses in Urine.—Elmer mentions the following as the diseases in which albumosuria occurs most frequently: Multiple myeloma of bones, tuberculosis, especially pulmonary, croupous pneumonia in the stage of resolution, septicemia, pyemia, abscess, carcinoma and sarcoma when undergoing rapid retrograde changes, and the leukemias and Hodgkin's disease after treatment with Roentgen rays. He recommends the following test for albumose as being the most practical. The reagent consists of a 50 per cent solution of sulphosalicylic acid in distilled water. This reagent precipitates on contact all proteids found in the urine, but the albumoses redissolve on warming the urine, while albumins, globulins, etc., do not, so that when any or all of the albumin group are present with albumoses filtered the warmed urine will separate them, and the albumoses be determined by cooling the filtrate. Care must be taken to avoid prolonged boiling, for if mucins be present they may be broken down, one of the products being an albumose. A very small quantity of albumoses may be detected by dividing the urine after adding the reagent and warming one part while cooling the other and comparing the tubes before a dark surface.

5 Event of Tuberculosis on Native Population.—Gardiner claims to have made a thorough study of this question and states that his records show that the natives of open resorts for the tuberculous are in a better physiologic condition to resist tuberculous infection than the average inhabitants of other towns and cities. All the facts seem to prove that it is better to be exposed daily for years to the germs from the tuberculous in a superior climate than not to be so frequently exposed, but to be under the influence of bad air and overcrowding in an unfavorable climate. The event of the tuberculous among the dwellers in our resorts is not so dangerous a factor as it has been supposed to be. The lesson to be drawn from this is to increase human resistance by proper ventilation day and night, for then the tubercle bacillus will lose its power to infect mankind or to destroy life.

Boston Medical and Surgical Journal.

February 1.

- 6 Sanitary Importance of Clean Milk. C Harrington Boston
- 7 Results of Operation for the Removal of Cerebral Tumors. P C Knapp Boston
- 8 Two Cases of Erythema Multiforme Desquamativum. P K Brown, San Francisco

8 Erythema Multiforme Desquamativum.—The two cases reported by Brown are interesting for several reasons. One of the patients had gastrointestinal crises, fever, joint, heart and kidney complications. The other had intestinal disturbances, fever, slight kidney disturbance, angioneurotic edema and purpura with hemorrhages from the mucous membranes. Digestive manifestations preceded all the attacks in one case and preceded the single attack in the other. For ten days the first patient suffered from epigastric pain, cramp like in character. When first seen there was a diffuse, tiny, regular eruption all over the trunk, shoulders and thighs, which had not appeared on the face, neck, arms or legs. It was perfectly discrete. It had no crescentic appearance and consisted of tiny reddened areas, slightly raised in the center, each one about the size of a pinhead. There was no pain anywhere. There had been

slight throat symptoms forty eight hours before, but there was no eruption on the cheeks or throat, and no coryza or eye symptoms. The glands were slightly enlarged everywhere. There was no evidence of any skin infection. Temperature was 99.5 the following day, and the eruption had covered the entire body and the face except about the mouth. Where the itching had caused the patient to scratch it a good deal, it was diffusely red between the patches, looking more like scarlet fever. There was a shotty feel to the eruption on the trunk and extremities. The palms and soles were also affected. Desquamation was complete six weeks after the attack was over. The second case was diagnosed at first as one of German measles. There was no eruption on the face at all, but marked pallor. The papillae on the tongue were prominent and the tongue itself coated. The tonsils were slightly large and red, but there was no membrane. There was no tenderness behind the ears, but the glands in the neck were slightly enlarged. The axillary and inguinal glands were tender and markedly enlarged, some of them being as large as very large beans. There was some swelling of the tissue under the angle of the right side of the jaw. There were some mottled red blotches, one nearly 1 cm broad, on both ears. Over the chest and particularly over the back there was a slightly mottled but diffuse blush. It was particularly marked over the neck and buttocks, around the genital organs and slightly down the inner side of the thighs. Toward the extremities it became much more mottled, certain of the blotches being quite discrete. On the dependent parts the pressure of the clothes in folds had caused linear ecchymoses, looking very much like long scratches, particularly marked over the buttocks and shoulders. There was a marked absence of eruption or blush in the axillary spaces. This patient had several such attacks, in the last of which the eruption was distinctly purpuric.

New York Medical Journal.

February 3.

- 9 Medical Management of Nephritis. J Tyson Philadelphia
- 10 Hereditary Syphilis. R W Taylor New York
- 11 State Medicine. E C Carter Manila.
- 12 Case of Tumor of Brain, with Autopsy. W M Leszynski New York
- 13 Trials at the Trial Case. T H Shastid Marion Ill
- 14 Athletics for Young Women. W L Howard, Baltimore
- 15 Gonococcus Vaginitis in Little Girl. W D Trenwith New York
- 16 Tuberculosis of the Appendix Vermiformis. H A. Haubold, New York.

9 Medical Treatment of Nephritis.—In this paper Tyson repeats the statements made by him in previous papers.

10 Hereditary Syphilis.—Taylor attempts to prove, by cases, that third infection in syphilis is an established fact. A synopsis of the first case is as follows: First—Grandmother infected with syphilis in 1869, had secondary and tertiary lesions of much severity. She was careless of treatment. She was the first genitor. Second.—In 1872 this woman gave birth to a girl baby which presented classical hereditary syphilitic symptoms. After many vicissitudes this child (the second genitor) grew up seemingly healthy and strong, and never having been infected with acquired syphilis, she in two years gave birth to a baby daughter. Third.—In 1890 this second genitor gave birth to a miserable weakling girl, atrophic, marasmic, with very little strength and vitality, who at birth gave no distinct evidence of hereditary syphilis (third generation), but who in five years developed true dystrophic symptoms, Hutchinson's teeth, keratitis, ear troubles, and osseous swellings, and later showed unmistakable evidence of a virulent form of late syphilitic infection (third) in characteristic gummatous tumors and ulcers. This third syphilitic by inheritance is now growing up a victim of infantilism and general atrophy. A synopsis of the second case is as follows: First—A healthy woman, married to a man, syphilitic two years, contracted syphilis two years later coincidently with the development of pregnancy. Second—She gave birth to a male child who, soon after birth, was characteristically hereditary syphilitic and later developed typical undoubted evidences of inherited taint, which showed themselves for several years. He never was infected with acquired syphilis. He married a healthy girl. Third—Three years after the marriage of this second genitor, the wife gave birth to a thin, weakly girl, who

presented the appearances of infantilism. At 4 years many dystrophic symptoms of the bones and joints developed and were promptly cured by active antisyphilitic treatment. This case, therefore, was a clearly marked illustration of the development of syphilis in three generations. In the first, active syphilis, in the second, virulent hereditary syphilis, and, in the third, a dyscrasic condition attended with well marked dystrophic changes.

15 Gonococcus Vaginitis—Trendelenburg emphasizes the following points: 1 The great need for early diagnosis and treatment. 2 The necessity for frequent douching with large quantities of the solution. 3 The nonuse of absorbent cotton as a dressing for the parts. 4 The need for care and gentleness in the treatment. 5 That a case should not be considered as cured until not only the discharge has stopped, but until it is no longer possible to find the gonococcus in the vaginal secretions microscopically. 6 The need of impressing the mother with the serious nature of the disease and the necessity for treatment until the gonococci have entirely disappeared. 7 The greater dissemination of knowledge among men and women who suffer from gonorrhea as to its infectiousness to others and its power to do, at times, great harm, at a period remote from the time of primary infection when the disease remains uncured. 8 The great necessity for care in keeping cases of gonococcus vaginitis out of day nurseries and babies' hospitals because of the epidemic character which it assumes among the inmates once it has gained a foothold.

16 Tuberculosis of the Appendix—The diagnosis of Hanbold's case was confirmed microscopically. No tuberculous foci were noted in the peritoneum and a careful examination of the lungs did not reveal any indication of pulmonary tuberculosis. There was no cough and no expectoration. The patient died about nine weeks after the operation.

Medical Record, New York February 3

- 17 *Clean Air. T. M. Prudden, New York.
- 18 *What Constitutes Pneumonia? A. H. Smith, New York.
- 19 *Danger and Protection in X-Ray Work. W. Lehmann, San Francisco.
- 20 Trachoma in Children. C. C. Bradley, New York.
- 21 *Two Cases of Pseudoleukemic Anemia of Infancy. E. M. Sill, New York.
- 22 Air de Luxe. W. P. Northrup, New York.

17 Clean Air—Prudden says that it is interesting to note from the careful experiments which have been made that ordinary ventilation, however effective it may be in supplying fresh air and in removing contaminated gases, has no noteworthy effect in the removal of dust, either floating or at rest. Experiments also prove that hanging garments out of doors merely, is not to be commended. Unless such articles are brushed or beaten, or shaken, or unless they flap violently in the wind, bacteria are not removed in great numbers. The writer emphasizes the fact that a large part of so called disinfection might be replaced to advantage with proper methods of sweeping, dusting and mopping, if all these were not so simple and commonplace, and if everyone could realize the significance of dust in the conveyance of infectious agents. He emphasizes the importance of the use of moist mops on the floors, and of moist dust cloths on the solid furniture. He denounces the employment of the feather duster. The sprinkling of damp sawdust on floors before sweeping is a great aid in getting rid of much dust. He declares that the infectious diseases of the respiratory organs are steadily increasing as people are more and more huddled together in offices, dwellings, traveling conveyances and places of public assemblage. A large number of these diseases are directly traceable to infectious material passed off in spitting, coughing and sneezing, by those suffering from various degrees of local disease. Promiscuous spitting should be stopped. The harmfulness of coughing and sneezing can in most instances be controlled by the use of the handkerchief.

18 What Constitutes Pneumonia?—Smith contends that a single pneumococcus lodged in an air cell and causing there its specific irritation and consequent exudation, presents all the essentials of the disease. He declares that it matters not if ten minutes later the organism is dislodged and swept away by the exudate the patient even then has had a pneumonia, if

only a monococcal one. If later the bronchiole terminating in the lobule invaded becomes blocked, and the further spread of the infection is prevented, the patient may escape with a unilobular pneumonia, but it will be pneumonia nevertheless. Smith believes that such abortive attacks are very common.

19 Danger and Protection in X-Ray Work—Lehmann emphasizes the necessity for shielding the operator not only from the Roentgen rays, but from the secondary rays as well. He says that the best means of protection is a gown of impermeable material. Complete suits have been made of material of different degrees of safety, the heavier and bulkier the better, and sheet lead is the only safe thing. In a suit of this sort described by the author, the apron of Roentgen proof material reached from the neck to the knees, the cap covered the face and head and was provided with lead glasses. The gloves were also ray proof, but neat enough to permit of handling screen and apparatus.

21 Pseudoleukemic Anemia of Infancy—Sill reports two cases. One of his patients died six weeks after he was called in, the other is still alive after five months and is steadily improving. The treatment has been proper diet, cod liver oil and Fowler's solution.

St. Louis Medical Review January 27

- 23 *Appendicitis Complicated with Typhoid Fever. A. Avery, Sapulpa, I. T.

February 3

- 24 *Bacterial Inoculation as Guided by Wright's Opsonic Index Curve, with Special Reference to the use of Tuberculin. J. R. Clemens, St. Louis.
- 25 Present Position of the Surgery of Carcinoma of the Cecum. G. W. Broome, St. Louis.
- 26 Materia Medica. D. L. Field, Jeffersonville, Ind.

23 Appendicitis Complicated with Typhoid—When first seen, Avery's patient was suffering acute pain in the abdomen. This pain was most intense over the hypochondrium, but the entire abdomen was tender to the touch, with severe local tenderness over McBurney's point. The right rectus was rigid, the patient was nauseated at times, had some headache, and was constipated. The temperature varied between 101 and 103.5 F. In spite of all medication the bowels did not move until about the fifth or sixth day. About the seventh day a slight wave made its appearance in the temperature chart, an evening rise and a morning fall. Rose colored spots appeared on the abdomen three or four days later. The stools at this time were characteristic of typhoid. The disease ran the usual course and the patient made a complete recovery. A laparotomy was then done and the appendix was found completely wrapped up by the omentum to which it had become adherent, and showed distinct signs of recent inflammation.

24 Wright's Opsonic Index—Attention is drawn by Clemens to the advantages of Wright's method as a means for diagnosing tuberculosis. He considers it harmless and practically infallible. It is especially valuable because the diagnosis is made outside the patient's body, it permits of the use of tuberculin to the patient's best advantage—curative, it removes the dangers of diagnosis by tuberculin.

American Journal of Medical Sciences, Philadelphia January

- 27 *Influence of Light in the Production of Cancer of the Skin. J. N. Hyde, Chicago.
- 28 *New Method of Operating on Dupuytren's Contraction of the Palmar Fascia. W. W. Keen, Philadelphia.
- 29 Success which Attends Extraction of Cataract and the Causes that Contribute to It. S. Theobald, Baltimore.
- 30 Fever in Chronic Endocarditis. J. S. Thacher, New York.
- 31 *Opium in Myocarditis, Weak Heart, and Dilated Heart. J. H. Musser, Philadelphia.
- 32 Disease of the Heart Muscle Treated in the Bellevue Hospital Out Patient Department from November, 1903 to June, 1905. T. B. Barringer, Jr.
- 33 Classification of Cases Heretofore Called Rheumatoid Arthritis. P. W. Nathan, New York.
- 34 *Rheumatism of the Stomach with Incidental Hematemesis of Uncertain Origin. H. Illoway, New York.
- 35 *Extraordinary Case of Anthracosis Simulating Thoracic Aneurysm. H. Sewall, Denver, Colo.
- 36 Enteric and Mesenteric Crystals. J. C. Ayer, New York.
- 37 Action of Various Substances on Pure Cultures of the Amoeba Dysenteriae. J. B. Thomas, Philippine Islands.
- 38 Prolongation of Pregnancy Considered from the Obstetric and Surgical Standpoint. C. G. Cumston, Boston.
- 39 Tumor of the Cauda Equina. E. Schmoll, San Francisco, Cal.
- 40 *Spirochete Found in Syphilis. R. C. Rosenberger, Philadelphia.

27 Light and Skin Cancer—According to Hyde, the skin of the human body, in a certain proportion of individuals, and in those only, is hypersensitive to the action of the actinic rays of the spectrum. This hypersensitiveness may be exhibited in the production of either hyperemia, pigmentation, telangiectasis, atrophy, hyperkeratosis or cancerosis of the skin, or by all, and at times in a determined order of succession. In the form of childhood cancerosis known as *xeroderma pigmentosum*, the pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin resulting from exposure to rays of light are exhibited early in life, instances of this disorder being exceedingly rare. Pigmentation, telangiectasis, atrophy, hyperkeratosis, and cancerosis of the skin occur in adults much more frequently than in childhood, reaction to the play of actinic rays of light on the surface being chiefly determined after the middle periods of life have been reached. Physiologic pigmentation of the skin in the colored races seems to furnish immunity against cancerosis of that organ. The colored races apparently suffer less than the whites from cancer of other organs than the skin. This relative immunity may be due to the protection from actinic rays of light furnished by the pigment of the integument.

28 New Operation for Dupuytren's Contraction—Keen refers to a case of Dupuytren's contraction of the palmar fascia in which he performed a new operation, the parts being anaesthetized by neural infiltration. He first infiltrated the skin just above the wrist, over the median and the ulnar nerves, with a solution of beta eucain and adrenalin, of which the following is the formula:

R. Sol. adrenaLin chlorid	5ss	10
Beta eucain	5ss	2
Sodu chlorid	3ii	8
Aqua dest. q s ad	3vi	210

Having exposed these two nerves he then injected a few drops of this same solution into them. After waiting for a considerable time he attempted to begin the operation, but found that it was exceedingly painful. Scarcely any diminution of sensation had been produced by the infiltration, although the injection at the site of the operation on the two nerves had been entirely satisfactory. He then injected into each nerve four or five drops of a 4 per cent solution of cocaine, and within three minutes was able to begin the operation without causing the slightest pain. In consequence of the very careful dissection in the palm, the operation lasted over half an hour. The local anesthesia at its end was quite as satisfactory as at the beginning. He began the incision at the ball of the thumb on a line with the interspace between the forefinger and middle finger, went down almost to the web between the forefinger and middle finger, then transversely to a point corresponding to the beginning of the incision on the other side of the hand. The dissection of the flap was begun at the transverse incision corresponding to the knuckles and went directly down to the sheaths of the tendons. He dissected back the entire flap, including on the under surface of the flap the entire palmar fascia. He then dissected away the palmar fascia from the under surface of the flap, the fingers of the assistant being on the palmar surface of the skin, so as to warn him if he got too close to the skin. In order to dissect out the fibers going to the index and the little fingers, he next undermined the skin overlying them, and was able to get at the beginning small bands of fibrous tissue which had not been turned back in the large flap. He tied half a dozen small vessels with catgut, so as to have as little danger from any effused blood as possible. Union took place by first intention throughout both of the small operation wounds over the nerves and that in the palm of the hand. No sloughing whatever took place, even a little nick that he made inadvertently in the skin of the palm was rather advantageous, as it allowed what little blood was effused under the flap to escape. The patient was discharged from the hospital with almost normal motion of the fingers.

31 Opium in Heart Disease—According to Musser, there are sound clinical reasons for the belief that opium is a tonic in cardiac debility. He says that in cases of weak heart after exhausting disease, after prolonged mental and physical

pain, and without organic lesion of valves or muscle, opium is of advantage. In cases of failing compensation, with the onset of stasis, the heart is supported, especially if the unfortunate possessor is an impressionable subject who frets and fumes because of the ordinary irritations of life. In the gradual engorgements from myocardial dilatation, in chronic parenchymatous nephritis, and in arteriosclerosis it is of value. If the patient is hypochondriacal or hypersensitive the second daily dose of opium invites sleep and induces a feeling of well being. The dyspnea of myocarditis is relieved or prevented by continuous small doses of morphin for a very long time. Musser has seen a form or stage of myocarditis with restlessness, Cheyne Stokes breathing, dyspnea and rapid pulse helped by continuous doses of opium. The tachycardia of Graves' disease is relieved and in three of his cases it appeared to contribute to the cure of the disease. In nervous and irritable patients opium is almost necessary to induce comfort.

34 Rheumatism of Stomach—Illoay cites the case of a man, aged 67, of abstemious habits, who was troubled with dyspepsia for thirty years. He suffered from attacks of pain in his stomach, which usually came on about the fall of the year and continued, off and on, throughout the whole winter. He always felt well during the summer heat. The diagnosis was dyspepsia, and various dietary regimens and many medicines were prescribed, but the result was always a negative one. For a year past he suffered severely from cramps, coming on mostly in the night, and becoming more severe when the weather was about to change. After a careful study of the symptoms of this case and the results obtained from climatic treatment, Illoay is convinced that it was a case of rheumatism of the stomach.

35 Anthracosis Simulating Thoracic Aneurism—Sewall's patient suffered from a mild degree of pulmonary tuberculosis. Besides this there could be heard a systolic bruit confined to an area represented by the lower half of the right scapula. This bruit was suspected to arise from a thoracic aneurism. The patient felt quite well except for some shortness of breath. After a six months' stay in bed she coughed up some bright blood and complained of intense pain over her heart, greatly aggravated by inspiration. These events were taken as evidence that an aneurism had ruptured by the section, the blood probably penetrating the pericardial cavity. Death ensued after twenty four hours. At the autopsy no sign of aneurism was found. At the root of the right lung there was a hard, solid mass, pyriform in shape, four inches long, over three inches wide and two and a half inches deep. This mass, on section, was found to be black in color and gristly in resistance. At the root of the left lung, immediately posterior to the left bronchus, was a similar mass consisting of two portions. Numerous small black bodies, the size of grains of wheat, were scattered throughout the lung. An extraordinary degree of emphysema involved the margins of the lung. On chemical examination the pigmented masses were found to be coal dust. Hyperplasia of connective tissue also was present in the masses, and Sewall is of the opinion that this was due to the irritation of the coal dust, a true anthracosis.

40 Spirochete in Syphilis—During the past four months Rosenberger has made studies of chancres, mucous patches, enlarged glands, condylomas, eruptions and cerebrospinal fluid with a view to finding the spirochete and establishing its causative relationship to syphilis. In every specimen examined, with the exception of the cerebrospinal fluid, the *Spirocheta pallida* was demonstrable.

41 Floating Kidney—According to Longyear, the usual operation of nephropexy is inadequate because it fails to meet all the indications in the conditions present. To be effective the operation must certainly do one thing which the stitching of the stripped kidney, only, to the loin, can not accomplish, viz., the prevention of the descent of the ascending colon and cecum. The operation must have for its aim the attachment of both kidney and bowel, or the nephrocolic attachment may be severed—thus preventing traction on the kidney and duodenum—and the kidney fixed by simply stitching the

severed ligament into the wound at its appendage. The operation which Longyear has found the most easy of accomplishment, and which seems to meet the two indications mentioned is the fixation of the nephrocolic ligament into the upper angle of the wound without severing it from the colon, and also fastening any redundant mesentery that may be present in the lower angle of the wound. The convergence of the framework of the fatty capsule into this ligament makes a structure of sufficient strength to be depended on to hold the displaced organs, if securely attached to the aponeurotic tissue preferably where it is thick near the twelfth rib. The kidney fixed by this ligament is placed at nearly its normal position and is not held in an immovable position, as is the case when united to the muscles by the usual operation. The bowel is also held by the same attachment and undue descent of the cecum prevented and it is possible that this will prove sufficient but at present the writer deems the shortening of a redundant mesentery best if for no other reason than that it will prevent traction on the other attachment while it is becoming firmly fixed. The opening into the peritoneal cavity has the added advantage of giving free access to the kidney and enabling the operator to handle the organ at will, through its close attachment to the colon, traction on the latter, brought through the wound serving to bring the kidney close to the opening. Longyear says that the difficulty of handling the kidney when grasped by the sides of the fatty capsule has been experienced by all as the tissue gives way readily and appears to have little resisting power. This is because the fine fibers forming the network of this capsule are spread out and the trabeculae widely separated by the fat deposited between them. As they converge below the lower pole of the kidney to become inserted into the posterior wall of the bowel, they are parallel to each other, and by their aggregation form a strong band of a good deal of resisting power, so that the kidney can be readily held in firm fixation by means of a blunt hook passed around it permitting complete control of the organ for examination or farther operation.

Detroit Medical Journal

January

- 41 Etiology of Floating Kidney with Suggestions Changing the Operative Technic of Nephropexy H W Longyear, Detroit
- 42 Neurac hernia C W Hitchcock Detroit
- 43 Anaesthesia and Urethral Strictures C S Oakman Detroit
- 44 Cost to the State of Those in Public Asylums Suffering from the Results of Venereal Diseases C B Burr Illat Mich
- 45 Venereal Disease in Ophthalmology F Carrow Detroit
- 46 Extradural Abscess—Radical Operation E. Amberg, Detroit

Journal of the Association of Military Surgeons, Carlisle, Pa

January

- 47 Prevention of Disease in the Army and the Best Method of Accomplishing that Result J R Kean U S A
- 48 Proposed Regimental Medical Supply Table for the National Guard S C Stanton Chicago
- 49 Stretchers Used on Warships S Suzuki I J N
- 50 Danger from Typhoid Urine in Military Camps C S Butler
- 51 Emergency Field Service Tourniquet H S Hansell, U S N

48 Medical Supply Table for National Guard—Stanton has prepared a list of fifty-four medicines which he believes contains all the medical supplies absolutely essential for an ordinary tour of duty of a regiment of the national guard. No quantities are specified, as it is intended that the state shall keep these supplies in store, and that requisitions shall be made from day to day as occasion may demand. This medical supply table has been adopted as the official supply table for the use of the Illinois National Guard and Naval Reserve. Included in this list are acetanilid compound, boric acid, boro salicylic acid, salicylic acid, alcohol, alum, ammonium bromid, aromatic spirits of ammonia, amyl nitrite, bismuth subgallate, compound tincture of benzoin, chloroform, antiseptic bichlorid tablets, iodine, calomel, magnesium sulphate, morphia, Dover's powder, nitroglycerin, castor oil, peptonizing tablets, petrolatum spissum, aloin compound pills.

Brooklyn Medical Journal

January

- 52 Pus in the Pelvis G McNaughton
- 53 Surgery of the Female Pelvic Floor C Jewett, New York
- 54 Plan for the Early Operative Diagnosis of Carcinoma of the Stomach G R Fowler, New York
- 55 Postoperative Paralysis R S Fowler New York
- 56 The Medical Side of Surgery W S Hubbard

53 Surgery of Pelvic Floor—Jewett summarizes his paper as follows. The pelvic floor is essentially a muscular diaphragm. The muscles of the floor are disposed in two distinct layers. These layers are separated by the plane of the hymen. The upper layer is the levator ani. The general trend of the levator fibers is toward the coccyx. The rectum and the perineal body are in relation with the median borders of the levator muscles. The tubular viscera are slung in the pelvis mainly by the levator attachments to the rectum and to the bridge of fibrous elements in the perineal body. The most essential part of the obstetric injury is the rupture of these fascial attachments behind the vaginal sulcus and alongside the rectum. The reparative operation should be addressed, in the main, to the restoration of these fascial attachments. Jewett believes that restoration *ad integrum* is best effected by the technic of Emmet, and that Holden's operation is the simplest and most definite of the procedures yet devised which attempts support by substituting an artificial for the natural relations of the pubic bands of the levator muscles.

American Journal of Surgery, New York.

January

- 57 Technic of Ureteral Dilatations F C Valentine and T M Townsend New York
- 58 Diagnosis and Differentiation of Cervical Tumors and Enlargements M A Austin, Anderson, Ind
- 59 Plaster of Paris and How to Use It (To be continued) M W Ware, New York
- 60 Relation of Malposition of the Uterus to Endometritis. B Miller Hamburg Germany
- 61 Reflections on Inguinal Hernia C A Butler, Hobenwald Tenn
- 62 Insanity a Symptom of Old Fracture of Skull, Operation Recovery T E Chambers St. Louis

61 Inguinal Hernia—For the radical cure of inguinal hernia Butler employs a modification of Halstead's operation. A skin incision is made parallel to Poupart's ligament and three-fourths of an inch internal to it, extending from a point slightly beyond the internal abdominal ring to the spine of the pubes. The subcutaneous tissues are divided in their turn the full length of the skin incision. The external oblique is first incised parallel to the direction of its own fibers, then the internal oblique and transversalis are cut, and finally the transversalis fascia having been divided, the spermatic canal is fully exposed from the internal to the external abdominal ring, thus bringing into view the cord. The vas deferens is isolated and if there is any tendency to enlargement of its accompanying veins all but two or three are ligated, above and below, and dissected out. The subcutaneous incision is extended five-eighths of an inch or more beyond the internal ring, in order to release the constriction and to get firm, fresh tissue from which to build the new exit for the cord. Following this the sac is opened, its contents carefully examined and replaced within the abdomen. A ligature of catgut is now passed around the neck of the sac close to the internal ring and the sac is cut away. The ends of the ligature which have been left long are threaded separately through long curved needles, passed eye end first through the abdominal opening along side of the stump of the sac and brought out a quarter of an inch apart through the internal oblique at a point one and one-half inches internal to the upper angle of the incision, where gentle traction is made to draw the stump of the sac away from the field of operation, when, by tying the ligature, the stump is held in a permanently displaced position. Any cicatricial mass or tissue of questionable vitality is dissected away from about the old internal abdominal ring. Each muscular layer is sutured separately, allowing the edges to overlap as much as the tension will allow, until the external oblique is reached. Instead of suturing the aponeurosis of the external oblique in a direct line, as in case of the other layers, a strip of one-half inch wide and one and one-half inches long is cut from the internal border of the external oblique at a point directly opposite the site of the new ring, leaving the upper end of the strip fast and passing the loose end under the cord and suturing it to the superior surface of Poupart's ligament. This gives a firm ring with the fibers running crosswise to the direction of greatest strain. The remainder of the aponeurosis is sutured below this loop in the same manner as the underlying structures, using silk or fine silver wire. Butler says that this portion of the method was employed by

the late W V Morgan of Indianapolis, for two years prior to his death and since that time by himself, together in more than fifty cases, with uniformly good results. The hernia now having been reduced, the stump of sac displaced, away from the operative field, the cord located on its new bed and the hernial opening obliterated, all that remains to be done is to suture the skin firmly with kangaroo tendon and to apply a dry dressing.

Archives of Ophthalmology, New York.

November

- 63 Extraction of Cataract in the Capsule H Smith, Jullundur Punjab India
- 64 Two Cases of Subperiosteal Hemorrhage of the Orbit from Scurvy C B Meding New York
- 65 Melanoma of the Iris E Anargyros Athens
- 66 Examination for Central Scotoma C Hess Würzburg
- 67 Tenotomy and Advancement C Froelich
- 68 Tetanic Cataract Ld Zirm Olmütz

St Louis Courier of Medicine

December

- 69 Albuminuric Iridocyclitis N M Semple St Louis
- 70 Stab Wound of the Heart R H Campbell St Louis
- 71 Anatomic and Pathologic Observations on the Formation of Hernia at Hesselbach's Triangle W T Coughlin St Louis
- 72 Formation of Hernial Sac by the Obliterated Hypogastric Artery W C G Kirchner St Louis
- 73 Tumors of the Cerebellum E A Babler St Louis
- 74 Alkalies in Infant Feeding J Zahorsky St Louis

Journal of Medicine and Science, Portland, Maine

December

- 75 Silver Salts in Ocular Therapeutics G F Libby Denver
- 76 Some of the Methods for the Treatment of Cancer of the Rectum L H Adler Jr
- 77 A Physician's Pilgrimage H F Twitchell Portland
- 78 Complications of Pregnancy, Treated Surgically F D Donoghue Boston
- 79 How to Buy Life Insurance, a Reply to the Critics of the Life Insurance Companies B G March, Portland, Me

Vermont Medical Monthly, Burlington

January

- 80 Intencephalus M S Abbott and F Lockhart, McGill
- 80½ General Principles of Alkaloidal Medication W C Abbott, Chicago
- 81 Acute Diarrheas of Children J H Buffum Wallingford Vt

Woman's Medical Journal, Toledo, Ohio

December

- 82 Prevention of Tuberculosis G W Webster Chicago
- 83 Psychology of Disease M M S Johnstone Chicago

Bulletin of the American Academy of Medicine, Easton, Pa.

December

- 84 Altruism in the Medical Profession W S Hall Chicago
- 85 Report of Committee on Laws Regulating the Practice of Medicine C McIntire Easton Pa.

Journal of Cutaneous Diseases, New York

January

- 86 Case of Undetermined Tropical Ulceration Involving the Nose Pharynx and Larynx J A Fordyce New York, and W F Arnold, U S N
- 87 Acute Septic Pemphigus G W Cray New York
- 88 Tuberculous Verrucosa Cutis J B Shelmire, Dallas Texas

American Practitioner and News, Louisville

January

- 89 Relation of Gynecology to Cystoscopy and Ureteral Catheterization B Robinson Chicago
- 90 How to Study the Heart E Marshall Louisville
- 91 Gastroptosis J J Moren Louisville
- 92 Vapor Method of Anesthesia J T Gwathmey New York

92—See abstract in THE JOURNAL, Oct 23, 1905, page 1359

Denver Medical Times

January

- 93 Intestinal Obstruction T H Hawkins Denver
- 94 Id. F L Dixon Denver
- 95 Intestinal Obstruction from Carcinoma of the Cecum C B Lyman Denver
- 96 Death of Hannah Greener the First Victim of Chloroform C G Parsons Denver
- 97 Radiology and Electrotherapeutics G H Stover Denver
- 98 Experiences During the Russo-Japanese Naval War S Suzuki I J N

Kentucky Medical Journal, Louisville.

January

- 99 Present Status of Gastric Surgery with Special Reference to the Treatment of Chronic Ulcer L Frank Louisville
- 100 Gastric Ulcer—Its Cause—The Pre-Ulcer Stage C G Lucas, Louisville
- 101 Gastric Ulcer—Its Diagnosis and Treatment S L Woody Louisville
- 101½ Surgical Aspects of Gastric Diseases A Schachner Louisville

100 and 101 Id—Nov 4 1905 page 1430

St Paul Medical Journal

January

- 102 Injuries in the Vicinity of the Elbow Joint J L Moore, Minneapolis
- 103 Trachoma and Its Treatment C Williams St Paul
- 104 Management of Acute Suppurative Otitis Media L A Nelson St Paul
- 105 Spastic Constipation T W Stamm, St Paul

Albany Medical Annals

January

- 106 Organization, Methods and Responsibilities in the Study of Medicine A Vander Veer Albany
- 107 Iridocyclitis T T Clark Westfield Mass
- 108 Malignant Ovarian Tumors in Children J L Donhauser Albany N Y

Washington Medical Annals

January

- 109 Eye Lesions of Syphilis from Standpoint of the General Practitioner W K Butler Washington D C
- 110 Cheery Tubercular Mesenteric and Retroperitoneal Glands in an Adult D S Lamb Washington D C
- 111 Sarcoma of the Tibia E M Hasbrouck, Washington D C
- 112 Tuberculous Meningitis in an Adult D S Lamb Washington D C
- 113 Lobar Pneumonia Followed by Meningitis S S Adams Washington, D C
- 114 Acute Yellow Atrophy of the Liver D S Lamb Washington, D C
- 115 Cases of Gastric Ulcer T N Vincent, Washington D C
- 116 Diphtheria of the Air Passages, Death by Asphyxia D S Lamb Washington D C
- 117 Historical Account of the Installation of Slow Sand Filtration of the Potomac River Water for the City of Washington G W Cook Washington D C
- 118 Diseases of the Indians More Especially of the Southwest United States and Northern Mexico A Hrdlicka U S National Museum

Medical Herald, St Joseph, Mo

January

- 119 Points on the Management of Labor C B Hardin, Kansas City
- 120 Treatment of Patients After Abdominal Operations D Morison St Joseph.

St. Louis Courier of Medicine

January

- 121 Tuberculosis in the Mississippi Valley W Porter St Louis
- 122 Juvenile Glaucoma Simplex Associated with Myasthenia Gastrica et Intestinalis J Green Jr St Louis
- 123 Treatment of Empyema R Hill St Louis
- 124 Tumors of the Cerebellum (Continued) E A Babler St Louis

Annals of Gynecology and Pediatrics, Boston

January

- 125 Tubal Abortion H C Coe New York
- 126 Hydatid Disease of the Ovary W T Gibb New York

Colorado Medicine, Denver

January

- 127 Loose Bodies in the Knee Joint F G Connell Salida Colo
- 128 Cases of Morphine J E Courtney Denver

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal

January 20

- 1 Treatment of Arteriosclerosis J Barr
- 2 *Significance of Small Quantities of Sugar and of Albumin in the Urine R W Burnet
- 3 Clinical Estimations of Purin Bodies in Gouty Urines I Walker
- 4 *Chemiotaxis J O W Barratt
- 5 Diagnostic Value of X Rays J M Davidson
- 6 Lead Poisoning from Electrolysis of Water Pipes G A E Roberts
- 7 *Action of Trypsin on the Living Cells of Jensen's Mouse Tumor J Beard

2 Significance of Sugar and Albumin in Urine.—Burnet thinks that it may be said that the presence of albumin in any appreciable amount in the urine is not normal nor physiologic, but that it does not necessarily imply coarse pathologic change and that it does not necessarily mean that the existing disturbance of function is permanent or progressive. At the same time, it can not be denied that a certain number of patients who at first are rightly placed in the above category do later show signs of definite organic kidney disease. The presence of sugar in the urine, in any appreciable quantity is abnormal, in the young it is of serious import, and, if persistent, is likely to lead to diabetes, in people past middle life, and especially in those of gouty type, it is of less consequence and usually yields to treatment more or less speedily to recur,

however, in some cases, under conditions similar to those under which it first appeared. The presence of both albumin and of sugar in the urine indicates serious disturbance in the metabolic processes, calling for relief to the nervous strain which the patient may have been undergoing, and an adjustment as far as can be of his environment, but Burnett thinks that under favorable conditions these patients may continue in at least fair average health for many years.

4 Chemiotaxis—Barratt summarizes his observations as follows

1 Paramoecia pass readily into tubes containing acid and alkaline solutions of sublethal concentration but pass still more readily into control tubes containing the same liquid as that in which the paramoecia are immersed.

2 Only negative chemiotaxis appears to be exerted by acids and alkalies on paramoecia. This negative chemiotaxis is marked in alkaline solutions of lethal concentration, and is slighter in acid solutions of lethal concentration.

3 There is no parallelism between (a) the lethal concentration of acids and alkalies for paramoecia and (b) the chemiotaxis of paramoecia in respect of acids and alkalies.

4 The taxis of paramoecia is modified when these organisms are transferred from live infusion to distilled water.

5 Chemiotaxis is not to be explained simply by reference to the acidity or alkalinity of the solutions employed. Mere change of concentration is an important factor in its production.

6 Negative chemiotaxis does not necessarily indicate that the liquid tested acts injuriously on the organisms employed.

7 Action of Trypsin on Living Cells—Beard tested the action of trypsin on the living cells of a Jensen's mouse tumor. Two minims of a 15 per cent solution of trypsin in sterilized distilled water were injected on four different occasions in the course of ten days. One of the mice was then found dead and a postmortem examination failed to reveal any cause of death. The microscopic examination demonstrated that every cell of the tumor was degenerated, fully half of the cells being represented by shapeless masses of particles, probably the remains of nuclei, and all the rest were mere skeletons of cells. The somatic tissues of the mouse, as represented by the leucocytes and connective tissue cells, were quite normal. The second mouse received nine injections in twenty-two days. The mouse was then killed and the tumor was exposed. The growth was about the size of a lentil and the cells were all degenerated. Beard believes that at the time this mouse was killed its cure from the cancer was not far distant, and that even without further treatment the tumor would in all probability have been absorbed shortly. A control mouse died at the same time that the second mouse was killed. The tumor in this control mouse was as large as the terminal phalanx of a man's thumb. Beard says that no matter how often this experiment is repeated, even with smaller doses of trypsin, the like results will be obtained. He is convinced that the action of trypsin on the cancer cell is to pull down the cancer albumin and the cancer ferment (malignin) produced by this

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- 8 Practical Diagnosis of the Diseases of the Skin W Evans
- 9 Bradycardia and Cardiac Arrhythmia Produced by Depression of Certain of the Functions of the Heart J Hay
- 10 Relief of Certain Headaches by the Administration of One of the Salts of Calcium G W Ross
- 11 Surgery of the Common Bile Duct B G A Moynihan
- 12 Primary Pneumococcus Peritonitis W C G Ashdowne
- 13 Necrosis of the Entire Renal Cortex of Both Kidneys H C Lloyd
- 14 Acute Hemorrhagic Pancreatitis G R Jeffrey
- 15 Volvulus of the Ascending and Transverse Colon, with Unusual Complication J Phillips

9 Bradycardia and Cardiac Arrhythmia—Hay reports a case of bradycardia due to heart block. When the patient was first seen the block was caused by depression of conductivity, later the conductivity became practically normal and the block which persisted was found to be caused by depression of excitability. Atropin increased the frequency of the stimulus production, but had no influence on the power of conductivity. Sounds were heard during the diastolic phase of the ventricles, they were synchronous with the wave in the jugular vein caused by the systole of the right auricle. Hay thinks the assumption justifiable that the sounds were produced by the auricle in its systole, and that the depression of the conductivity and excitability of the myocardium was probably due to impaired metabolism, secondary to an insufficient blood supply, the result of arteriosclerotic changes in the coronary arteries. The excitability of the musculature was unstable,

possibly as a result of nervous influences such as mental excitement.

10 Calcium Salts as a Headache Cure—Ross believes that we have in the salts of calcium a rational and effectual means of relieving headaches which are due to a deficient coagulability of the blood. He prefers the lactate of calcium to the chlorid because the latter is unpalatable, often nauseating, and occasionally not absorbed. The following has proved a satisfactory mixture.

Calcium lactatis	gr	xx	1
Tinct. capsici	m	½	033
Aquæ chloroformi		5i	30

Sig To be taken three times a day before noon.

If more convenient, fifteen grains of lactate of calcium dissolved in one third of a tumbler of water may be given in place of the mixture. If the lactate of calcium is not obtainable, fifteen grains of the chlorid and one ounce of camphor water may be substituted. The ingestion of one or two pints of milk a day is advisable though not essential. Ross says that in a number of cases, usually of the less severe type, considerable relief is felt in from half to one and a half hour after the administration of the calcium salt. In others the relief comes during the first twenty-four hours of treatment, while in almost all the cases the headaches disappear after the fourth day. He reiterates that it is advisable to continue the administration of calcium for three weeks in the milder type of headaches, and for six weeks in the more severe types. Ross has treated 48 patients according to this method.

12 Primary Pneumococcus Peritonitis—Ashdowne reports a case of acute peritonitis due to a primary infection by the diplococcus pneumoniae. With the exception of pain after meals for the past six months she had been quite well until fourteen days previously, when she was seized with abdominal pain, accompanied by diarrhea and vomiting. This she attributed to an error of diet and took some brandy, which relieved the pain. She remained in bed for two days, taking no solid food, and on the third day had recovered sufficiently to resume her household duties. Two days before admission to the hospital she was again seized with acute abdominal pain and diarrhea, she felt sick but did not vomit. She again treated herself, but as the symptoms continued on the following day she consulted her medical man, who gave her medicine which stopped the pain and diarrhea for the time. In the evening the pain returned and the abdomen commenced to swell. The abdomen was distended, more so above the umbilicus than below it. Movement was impaired, but there was no muscular rigidity. There was some tenderness over the right iliac region, but no evidence of a tumor. The abdomen was resonant except over the hypogastrium. Liver dullness was present. Rectal examination revealed nothing abnormal. The patient's menstrual periods were regular and one was then in progress. The heart and lungs were normal. Her temperature was 103.6 F, the pulse was 128, and the respirations were 32. The distension was most marked in the upper part of the abdomen and there was tenderness on pressure in this region, but the lower segment was less distended and there was no tenderness. The iliac fossæ were quite free from swelling or tenderness. On opening the abdomen in the middle line above the umbilicus, the stomach, which was greatly distended, presented a quantity of pus was found between the stomach and the liver with thick fibrinous deposits on the surface of the viscera in the vicinity. The pus was odorless, creamy, and of a greenish yellow color, with numerous flocculi floating in it. Some of this was collected and set aside for bacteriologic examination. The fibrinous deposits adhered to the peritoneal covering of the viscera and on removing them that membrane was seen to be lusterless, reddened, and in places inclined to bleed. No lesion of the stomach, duodenum or gall bladder could be found. A second opening was made below the umbilicus and a similar condition was found there. The appendix, intestines and uterine appendages were each in turn examined, but without finding anything to account for the onset of the condition. The peritoneal cavity was then sponged out and well flushed with sterilized water. A Keith's tube was placed in the pelvis and the rest of the incisions were closed. The patient recovered from the anæsthetic, but in the evening be

came very restless and later delirious, and died early the following morning. The pus removed at the time of the operation contained encapsulated diplococci and a pure culture of diplococci was obtained from it. There were no other organisms present.

Journal of Tropical Medicine, London
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- 16 Fit and Unfit Persons for Residence in Warm Climates W Hartigan
- 17 Mode of Infection in Malta Fever E H Ross
- 18 The Mosquito Worms of Trinidad and Their Real Nature A J B Duprev
- 19 Is Malta Fever Peculiar to Malta? L P Phillips

Semaine Médicale, Paris

- 20 (XXVI, No 2.) Les mesures sanitaires appliquées dans l'Afrique occidentale française (See news item, page 444)
- 21 La lithiase du cholédoque. A. Chauffard
- 22 Les réflexes de la pupille. E. Yenneman
- 23 (No 3.) L'exercice illégal de la médecine devant les tribunaux français depuis la mise en vigueur de la loi du 30 Novembre, 1892
- 24 Le souffle systolique de l'insuffisance aortique pure M Couto (Rio de Janeiro)

21 Lithiasis of the Common Bile Duct.—Chauffard gives an illustration of a calculus weighing 9 gm (nearly 140 grains) extracted from the common bile duct of a man of 48, there was no trace of inflammation or disturbance in the other biliary passages. He has also had occasion to observe a second case of pure lithiasis of the common bile duct, and discusses the symptomatology, which is characteristic. Both his patients were permanently cured by surgical removal of the stone. In 50 out of the 72 cases on record the calculus was a large single stone, forming a cast of the dilated duct. The one illustrated was two inches long by more than three-fourths of an inch in width. It develops like thrombosis in a vein, suggesting, he says, "an actual choledochal biliary thrombosis." When the obstruction from the stone induces expulsive colic and fever from retention of bile, the pancreas is liable to become inflamed in turn. It reacts with progressive sclerosis or more acute lesions. Chauffard urges the necessity for diagnosing these cases of lithiasis of the bile duct before it reaches this stage. Prompt removal of the stone without wasting time in medical measures will save the patient these disturbances and dangers. The icterus in his two cases was very slight and intermittent, and the stools were only occasionally clay colored. These fluctuations are due to the conditions of the walls of the duct. If they are swollen with inflammation there is more or less complete obstruction but when they are not inflamed they stretch and allow bile to trickle through. The pain is not characteristic, but localized tenderness in what he calls the "pancreas-choledochus zone" may be instructive. This zone is the space between a line perpendicular to the umbilicus and a second line drawn from the umbilicus at an angle of 45 degrees to the first line. The zone in this angle does not reach quite to the umbilicus below and does not extend for more than 3 cm along the slanting line. Experiments on the cadaver have shown that this zone corresponds to the head of the pancreas, traversed or skirted by the bile duct. The gall bladder is above and to the right, the distance between the gall bladder region and the zone being the length of the bile duct. Systematic exploration of this zone will generally reveal a point of extreme tenderness, referable either to the bile duct or to the pancreas. The fever in case of lithiasis of the bile duct occurs in spurts of high temperature, brief but frequent, suggesting the fever of icterus, and paralleled by hyperleucocytosis. His patient had lost 36 kilos (nearly 80 pounds) in ten months, suggesting the possibility of cancer. This decline in weight is probably due to the involvement of the pancreas in the process, interfering with pancreatic digestion. Secondary pancreatitis is especially liable to occur in lithiasis of the bile duct. This involvement of the pancreas can be determined by examination of the feces, revealing the lack of utilization of the fats ingested.

24 The Systolic Souffle of Pure Aortic Insufficiency.—Couto's article is based on personal experience and study of what has been written on the subject in Italy, Russia, South America and elsewhere. He argues that none of the explanations to date are correct, and gives diagrams which explain his concep-

tion of the phenomenon. He regards the two souffles heard in auscultation, one presystolic and the other diastolic, as the essential characteristics of pure aortic insufficiency. The organic cause of the first of these souffles resides in the alteration itself, which prevents the perfect closure of the semilunar valves during diastole. This presystolic souffle is due to the passage of a retrograde wave from the aorta into the ventricle, through the orifice of the aorta, during the occlusive phase of the systole.

Archiv f Gynäkologie, Berlin.

- 25 (LXXVI, No 3.) *Ueber das Zusammentreffen von Gravidität mit appendicitis und Typhlitis H Füh (Leipzig)
- 26 Ueber die Verlagerung des Coecums während der Gravidität in Rücksicht auf das Zusammentreffen derselben mit Appendicitis (displacement of caecum in pregnancy, in regard to coincidence of latter with appendicitis) Id
- 27 *Zur Aufklärung der Eklampsie Zweifel
- 28 Histologisches über das endometrium hypoplastischer Uteri O Schaeffer
- 29 *Zur Therapie der Uterus Ruptur J Eversmann
- 30 *Bakteriologische Verhältnisse in weiblichen Genitalsekreten II Natvig (Helsingfors)

25 Pregnancy Plus Appendicitis.—Füh has had occasion to observe 5 cases of this kind. From this experience and from study of the literature he concludes that appendicitis is a serious complication of pregnancy, especially on account of the tendency to recurrence. Recurrence was noted in 21 per cent of the cases recorded. Monod and others advise removal of the appendix, as a rule, even when there are no symptoms, at the third or fourth month of pregnancy if the patient has ever had appendicitis. In case of incipient appendicitis in a pregnant woman, all agree that immediate appendicectomy offers the only chance of cure. An important aid in differentiating appendicitis, he states, is the great difference between the temperature in the axilla and that in the rectum. In one of Füh's patients this difference amounted to from 19 to 26 Centigrade degrees. The anatomic conditions in pregnancy favor the evacuation through the vagina of an appendicitic abscess in the Douglas pouch. If there is too much danger of interrupting the pregnancy, the abscess can be opened through the rectum.

27 Eclampsia.—Zweifel found crystals of zinc paralactate in the urine of 17 eclamptic women. Lactic acid is a constant constituent of the urine in eclampsia. It is probably derived from the meat ingested, and he considers it responsible for the eclampsia. Everything seems to indicate that eclampsia is an acid intoxication. Lactic acid is a product of deficient oxidation. It was found both in the blood and in the urine of his eclamptic patients. Its appearance in the blood or urine is always an indication of morbid conditions. In one of the eclamptic women a large proportion of lactic acid was found in the blood during the attacks, but five hours after the last attack there was no longer a trace of it. In some cases a larger proportion of lactic acid was found in the blood of the fetus than in the mother's blood. Zweifel regards this as an argument in favor of immediate delivery at the first signs of eclampsia. The children, as a rule, do not seem to suffer from the maternal eclampsia. None of the children with lactic acid in the blood was born dead in his experience. The bag of waters should be emptied at once and delivery carried out under chloroform. It should not be forgotten that morphin in experimental research induces the appearance of lactic acid in the urine. Venesection is indicated and saline alkaline infusion (5 gm salt and 5 gm. sodium bicarbonate to the liter of water) to neutralize the lactic acid in the blood and favor its elimination. Lemonade with sodium or alkaline citrates is also beneficial. The stomach should be emptied before pouring in the lemonade. The tube can be introduced through the nose at need. Diuretics are also useful, 40 drops of a saturated solution of acetum scillæ or the like. He thinks the trouble is due to an excessive consumption of the oxygen in the body by the demands of the growing fetus. To supply oxygen is, therefore, the main indication. The shallow respiration of eclampsia does not allow of adequate intake of oxygen, and to insure deep breathing Zweifel applied electric stimuli (faradic) to the phrenic nerves. This transformed the type of respiration and the oxygen thus abundantly inhaled seemed to have a favorable action on the eclampsia. Restriction of meat during

pregnancy might reduce the formation of lactic acid. A vegetable diet seems more rational on this account. If pregnant women had their urine examined every two weeks for albumin, nephritis might be detected earlier. Some cases of clampsia, however, develop without preceding albuminuria.

29 Treatment of Rupture of Uterus—Eversmann summarizes the results of his own and others' experience in the statement that tamponing with a compressing bandage, gives the best results. This should be regarded as the standard treatment under general circumstances. If operative treatment becomes necessary, total removal of the uterus by a laparotomy with suture of the serosa offers the best chances. His statistics embrace 170 cases.

30 Bacteriology of Female Genital Secretions—Nativg's monograph fills 159 pages. It presents evidence in favor of the assumption that streptococci living as saprophytes in the vulva are liable to make their way into the uterus and to acquire virulence under these conditions. He knows of no instance of puerperal infection from this source, although he admits its possibility.

Archiv f. Verdauungs-Krankheiten, Boas', Berlin

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- 31 (XI No. 6) *Determination of Lower Outline of Stomach—
Influmung der unteren Magenlinien mit bes. Berücksichtigung der Radio-graphie. Schille (Leipzig)
- 2 *Magen-schleim (stomach mucus). I. Schütz (Münster) (Continued)
- 3 *Über die Sensibilität im Abdomen und über den MacBurney'schen Druck. Pauli G. Kelling (Dresden)
- 4 *Zur Kenntnis der Rectum Carcinome nebst Bemerkungen zur Früh-Diagnose. I. Boas
- 5 *Comparison of Sedentary and Active Occupations in Respect to Effect on the Intestinal Functions—Einfluss der Körperbewegung auf die Darmfunktion. I. Merzbach (Brüssel) (N. Y.)

31 Determination of Outlines of Stomach—Schille calls attention to the sources of error in determining the outlines of the stomach by inflation of the empty and percussion of the distended organ. All writers concur in stating that the normal stomach lies entirely above the umbilicus. When the stomach is distended with artificially induced gas it is forced downward sometimes as much as 2 cm. below its normal outline when the person stands. Another source of error is when the transverse colon lies in front of the stomach. The colon is forced forward as the stomach becomes distended by the formation of gas. Rieder has recently published, in the *Fortschritte d. d. Gebiete der Röntgenstrahlen* viii, No. 3, a fine collection of radiograms of the stomach and intestines. Schille's findings confirm them and Rieder's conclusions in every particular. Radiograms in case of not too corpulent persons throw light not only on the topography but also on the motor functions of the stomach to a surprising degree. In conclusion Schille warns that the repeated giving of bismuth should not be regarded as so innocent a matter as is generally assumed. To date no injury has been reported from its internal administration, but instances are on record of harm from its external use. In his tests he found that the findings of percussion, the patient standing, after a test meal, always coincided with the Roentgen findings.

32 The Mucus in the Stomach—Schütz has been studying the pathologic variations in the secretion of mucus in the stomach. His observations were made one hour after a test breakfast, examining the stomach content obtained by expression. He also examined the rinsing water obtained after the stomach has been emptied and rinsed clean, and the stomach contents obtained by rinsing and expression of the fasting stomach. He tabulates the findings in 110 patients with various stomach affections on whom these three tests were made. In 52 per cent of the cases the mucus was found in excessive amounts, while in the rest it was scanty or lacking altogether. The latter group included 9 cases of achylia, 8 of motor insufficiency, 7 of gastralgia, 9 of gastric neurosis, 4 of anacidity, 3 of hyperacidity, 1 of ectasia, 2 of chronic catarrh and 1 each of ulcer, subacidity, cicatricial stenosis of the pylorus, gastrosuccorrhoea, obstipation, nephrolithiasis, acute dyspepsia and icterus. In 28 cases of chronic gastric catarrh the mucus was found excessive at all three tests, as also in 6 cases of cancer of the stomach, in 1 of cancer of the liver and in 1 of ulcer

The mucus was found excessive in the second and third tests alone in 10 patients, including 1 case of ectasia, 2 of motor insufficiency, 1 of gastrosuccorrhoea, 1 of chronic nephritis with dyspepsia, and in 3 of gastric neurosis. The mucus was found excessive only in the second test in 2 cases of motor insufficiency and in 1 of a gastric neurosis, and only in the third test in 7 cases, including 2 of subacidity and 1 each of subacidity, enteroptosis, hyperacidity, ulcer, neurosis and cicatricial stenosis. He reviews in detail the groups of these various affections, and believes that his research will establish the conception of catarrh of the stomach on a more solid foundation, although he does not attempt to draw any general conclusions at present.

33 Sensibility of Abdomen—Kelling summarizes the conclusions of his extensive study of the subject as follows. It is necessary to investigate much more closely than has yet been done the conditions of sensibility in the region of the cecum. The sensibility of the skin must be distinguished from the tender points in the musculature and the latter from the tender points in the sacral hollow of the pelvis, and each and all should be compared with the symmetrical points on the other side of the abdomen. The tenderness at McBurney's point is purely nervous. At this point the nerves of the appendix correspond with those of the abdominal wall above, so that the condition of irritation in the sympathetic plexus of the region of the cecum induces hyperesthesia in the intercostal nerves and also at the places where the cutaneous nerves pass through the fascia. There is another tender spot in the sacral hollow of the pelvis, the ileocolic plexus, which may be hypersensitive and tender in case of essential irritative conditions, such as hysteria, neurasthenia, etc., or by radiation, as in case of appendicitis, colitis, cholelithiasis, etc. Hence tenderness in this region can not alone serve to diagnose appendicitis. Palpable anatomic findings are the only reliable basis for the diagnosis. For the differential diagnosis between appendicitis and cholecystitis, even icterus is not decisive except when it occurs without fever. Bacteria may be carried from the appendix into the liver and thence into the bile, and may thus induce cholangitis and cholecystitis. This is why icterus is not a rare accompaniment of appendicitis. It also explains the frequent combination of appendicitis and of subsequent cholelithiasis. When there is a striking lack of tenderness in the pathologic resistance and its vicinity, it is safe to assume that the sensation of pain, if it exists, is falsely located, and that it should be referred to the more centripetal sympathetic plexus or to the skin, and in the latter event to the symmetrical point opposite. In attacks suggesting appendicitis and requiring operation, special attention should be paid to the gall-bladder, particularly when the findings in the appendix are comparatively trifling. On the other hand, the appendix should always be investigated during an operation for gallstones. In cases suggesting appendicitis or a gallstone affection, without decided palpable findings, the diagnosis should be left in suspense but the treatment should be that of the more serious affection, namely, of appendicitis. The article is illustrated and the various points of special sensitiveness in the abdomen are described and the anatomic conditions explained.

34 Early Diagnosis of Rectal Cancer—Boas addresses this article to the general practitioner, expatiating on the latter's responsibility for the disaster sure to follow the overlooking of malignant disease in the rectum until the time for operation has passed. In 80 per cent of his 83 cases of carcinoma of the rectum the growth was inoperable when first seen. In several cases some physician had made a supposed careful examination of the rectum and yet had failed to discover it. In other cases the physician had detected the growth, but had not insisted on immediate operation, and the patients had wavered long before consenting to an operation, possibly wasting time with quacks in the interim. Boas does not have much hope of effectually influencing the public by newspaper articles, lectures, etc., along the lines of Winter's anticancer campaign (mentioned in the news columns of the last volume). When people are well they pay slight attention to warnings or admonitions and soon forget them. He suggests as a more effectual measure that physicians should have printed on the backs of their prescrip-

tions a series of warnings in regard to the first signs of cancer, and what should be done, similar to Winter's warning in regard to cancer of the uterus. Patients getting the prescriptions would read the warnings on the back. When people need prescriptions their minds are turned to thoughts regarding disease, consequently the warnings would make more impression than at other times and places. He says that if a hundred physicians would take this step, others would soon follow, and the constant reiteration of the warnings at an impressionable period could not fail to impress the public in time. Cancer of the rectum occurs, according to his experience, in about a third as many cases as cancer of the stomach (245), and nearly as often as cancer of the esophagus (100). As the food has been digested and assimilated in the upper part of the digestive tract, persons with cancer of the rectum do not grow thin and weak but may present a blooming aspect and gain in weight. Habitual constipation was noted in the history of 15 and hemorrhoids in 22 of his patients. The classic triad of symptoms, tenesmus, obstruction or diarrhea and blood and mucus in the stools are not observed at first in every case. In some of his patients the first symptoms were violent colic pains recurring at intervals in the abdomen or stomach, and in other cases pains in the region of the sacrum or coccyx. Such cases suggest the necessity for examination of the rectum, even when the symptoms point to other organs. In certain cases bleeding from the rectum was the first symptom to attract attention. The bleeding simulated hemorrhoidal hemorrhages especially as it so frequently affects persons already subject to hemorrhoids. The same applies to tenesmus, which is supposed to be frequent in case of hemorrhoids. His experience has been rather against this assumption. Tenesmus with hemorrhoids is more intermittent than that accompanying cancer of the rectum. In every case of tenesmus it is the physician's first duty to determine its cause. In at least 25 out of his total of 83 cases the tenesmus was not observed until from one to twenty-four months after the appearance of other symptoms, thus being a tardy symptom in two thirds of the cases. The course of rectal cancer may be long or short. In 24 cases in which the first symptoms had been noted only from three to twelve weeks before, he found 6 in which the growth was already inoperable and only 2 of the patients survived the operation for any length of time. On the other hand he encountered cases in which the symptoms dated from months and even two or three years before, and yet the growth could be successfully removed. Five of his 83 cases of rectal cancer were in diabetics, which he regards as more than a mere coincidence. In diagnosing this condition he calls attention to the odor of the underclothing in cases of rectal cancer, and it may be possible to detect spots on the underclothing with the same fetid not fecal, odor. Another important sign is the stools. The patients complain of several watery discharges during the day, sometimes containing hard lumps of feces. In case of ordinary enteritis or nervous diarrhea, the amount passed is comparatively large, but with rectal cancer the amounts are remarkably small, mere spurts. Boas never fails to inquire as to the character of the passages in every case of diarrhea that he encounters. Another diagnostic point is that the diarrhea in these cases persists unmodified by dietetic or vigorous medicinal measures. When he learns this fact in regard to a patient, he never wastes a moment before examining the rectum for cancer. Still another sign of this "false diarrhea" is that the intestines are not empty, but contain lumps of feces especially in the descending colon and the sigmoid flexure. This confirms the diagnosis of primary obstruction. Simple chronic diarrhea empties the intestines, but does not cause an increase in the indican in the urine. In the false diarrhea from obstruction, indican is found abundantly. Examination of the urine may therefore prove suggestive. Even if nothing suspicious can be found in the rectum after digital and ocular examination, the search should not be abandoned until after the sigmoid flexure has been investigated also. The prognosis may vary with the variety of the cancer and hence microscopic examination is advisable. If the growth is inoperable, palliative treatment gives more gratifying results in these cases than with cancer elsewhere. The physician should aim to keep the general health good, to keep the passage open and to avoid everything that might irritate the carcinoma.

Ordinary diet, including beans, peas, etc., is appropriate, only irritating hulls, skins, etc., must be avoided, the articles of food being prepared universally in the form of purées. Sugar, acids, salts, fats and oils should predominate as in any anti constipation diet. Mild laxatives are also required. The tenesmus must be kept under control by these measures, with opiates as the last resort. He refers to one patient kept in comparative health for four years by these means.

Deutsche medizinische Wochenschrift, Berlin and Leipzig

- 36 (XXVI No 51, December 21) *Therapie der Psoriasis D v Düring
- 37 Ueber Typhus Kulturen die sich den Immunitäts Reaktionen gegenüber atypisch verhalten A. Besserer und J. Jaffe.
- 38 Die Methylergrün-Provoca Methode für elektive Färbung der Bakterien im Schnitt (staining of bacteria in sections) Saathoff.
- 39 Ueber die Anwendung von Neutuberculin (Bacillenemulsion) Krause.
- 40 Die Priorität in der Tuberculin Herstellung und Anwendung C. Spengler (Davos).
- 41 Ueber die Anwendung der Bassinischen und Kocherschen Operation in der Leistenbruchtherapie (inguinal hernia) Baratski.
- 42 Advantages of Dry, Iodized Catgut—Trockenes Iod Catgut Herbold.
- 43 *Ueber Goldscheiders Methode der Herz Perkussion (Orthoperkussion) H. Curschmann and Schlayer (Concluded).
- 44 Apparatus for Clinical Tests of Taste.—Zur Untersuchung des Geschmackssinnes für klinische Zwecke W. Sternberg.
- 45 New Inventions of Interest to Physicians.—Erfindungen aus dem Gebiete der Medizin und der öffentlichen Gesundheitspflege. G. Justl.
- 46 *Dangers from Cheap Metal Spoons.—Anfechtbares Essgeschirr H. Steinheil.
- 47 With the German Red Cross in Manchuria.—Das Lazarett der Deutschen Vereine vom Roten Kreuz in Charkin A. Brentano (Concluded).
- 48 (No 52.) *Die Behandlung der Herz-Neurosen (of heart) T. Rumpf (Bonn).
- 49 Serum Treatment of Scarlet Fever.—Serum Behandlung des Scharlach B. Schick (Escherichs clinic, Vienna).
- 50 Negative Influence of Chlorin on Utilization of Lime in Infants.—Einfluss des Chlors auf die Kalkausnützung beim Säugling. A. Schütz.
- 51 Ueber Primär Effekt am Lid mit Demonstration von Spirochaeten Kowalewski.
- 52 Invaliden Versicherung und Tuberculose (Insurance against sickness) M. Wagner (See news items page 442).
- 53 Statistics in regard to Physicians in Germany.—Die Aerzte Deutschlands im Jahre 1905 G. Helmman.

36 Treatment of Psoriasis.—Düring thinks that not enough attention is paid to hydrotherapy in the treatment of psoriasis, especially sweat baths with dry heat. Douches, alternating hot water for two minutes and then cold water for two seconds, are another useful measure. The sensitiveness of the skin must be carefully determined for each individual case to gauge treatment. As a rule, he prefers oil of cade to chrysarobin and pyrogallol. The patients should be moderate in the use of alcohol, coffee and tobacco, and should avoid a "too nourishing" diet in general as tending to favor eruptions. Internal treatment of psoriasis he considers uncertain, useless and even harmful in some instances. Arsenic sometimes aggravates the symptoms or induces others. The salicylates and iodine internally have proved ineffectual in his experience, although he acquired the impression in some cases that potassium iodide internally promoted the action of external medication. He warns against thyroid treatment. In regard to prognosis he is quite pessimistic. The treatment which may cure one patient may have no effect on another, in a third, the old eruption may subside, but another follow close, and in a fourth it may transform a torpid process without subjective symptoms into an annoying and generalized affection, disturbing the general health.

43 Ortho-percussion.—Curschmann has found Goldscheider's technique of ortho percussion extremely reliable, the results coinciding invariably with the findings of ortho radiography. He has the patient recline and percusses during shallow respiration. The results have proved so reliable that he recommends this method of percussion as a valuable aid in diagnosis. In combination with the determination of the absolute dullness it allows a more complete oversight of the heart and main arteries than has hitherto been attainable in any way.

46 Dangers from Cheap Metal Spoons.—Steinheil gives an illustration of five spoons which he found used daily in cooking. The cheap alloy of which the spoons was made easily crumbled or melted off, so that fragments of the spoons dropped into the food and were probably eaten with it.

48 Cardiac Neuroses—In this clinical lecture Rumpf describes the various neuroses affecting the heart and the means of relieving them. In all forms the entire mode of life must be regulated, eating, drinking, sleep, exercise and gymnastics as well as mental activity must all be supervised. Injurious influences in the daily life must be eliminated after careful study of the anamnesis. He thinks a moderate altitude is better for heart neuroses than the seashore. In attacks of tachycardia, deep breathing while reclining may be found useful, both in curing and in preventing an attack. Ice to the heart has also done good service in some cases of heart neurosis on a hysteric or neurasthenic basis. One group of heart neuroses which prove especially obstinate to treatment are those that follow over exertion or trauma, especially excess in sports. The most essential symptom in this class is the great acceleration of the heart action at the slightest exertion, perhaps at the slightest movement. There is also weakness, with pallor and sometimes loss of weight. These cases require rest in bed for weeks or months, with care as to nourishment, avoidance of alcohol, coffee, tea and tobacco. Carbonated saline baths and cautious respiratory exercises while reclining, vibration massage and electricity may be tried. The psychic treatment is of great importance. The trouble may last for months, if not for years, and frequently entails arterio-sclerosis. There may have been dilatation of the heart, but it has subsided by the time the physician sees the patient, and foci of degeneration may have been left which escape diagnosis. Sometimes a heart neurosis of this kind follows an injury of the skull. In several cases of this kind he has observed consecutive arterio-sclerosis develop in a few years in young persons who never had used tobacco or alcohol to excess. So long as no organic affection can be detected in these traumatic cases they must be classed as neuroses. Cardiac neuroses may be induced from the digestive tract by direct mechanical influences, and further by reflex phenomena from the most varied points in the abdomen. The false angina pectoris and tachycardia that may result should be treated by emptying the stomach and intestines. Lavage of the stomach will relieve or possibly a glass of warm water in the morning before eating, followed by shaking the stomach through the abdominal wall. Drinking tepid water and putting the finger in the throat will induce a desire to vomit, which empties the stomach as the pylorus opens at the same time. The diet should be regulated. Coffee, especially after meals, is liable to interfere with digestion, prolonging the stay of the food in the stomach and favoring abnormal putrefaction. Tea may be allowed, but not in sufficient amounts to distend the stomach. Another form of neurosis is observed in obese patients whose weight has been rapidly reduced, allowing undue movability of the heart.

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- 55 Ueber Komplikationen der Uterus Myome speziell über Stiel-torsion mit schwerer innerer Blutung R v. Steinhilber
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- 101 *Fall von Veronal Vergiftung (poisoning) J. Geltinger
- 102 Active Immunization in Syphilis R. Kraus (Reply to A. Brandweiner's "Versuche über aktive Immunisierung bei Lues" in No 45. See paragraph 72 above)

57 Treatment of Inoperable Cancer of the Uterus—Chrobak remarks that in inoperable cases of cancer of the uterus the condition can be relieved by a partial operation to a greater extent than is generally recognized. He has had a patient gain 77 pounds after a palliative operation on an ovarian cancer. He does not believe in telling the patient that she has malignant disease, preferring to persuade her to submit to an operation, possibly adding that treatment by other measures is not so sure of results and that if intervention be postponed it may come too late. He regards it as a greater satisfaction than the most brilliant operation when he has succeeded in winning the confidence of a cancer patient and has been able to keep her during the entire course of the disease unaware of its true nature and full of hope until death brought release. The physician should strive to ward off injurious influences and should vary the therapeutic measures, keeping hope alive. Curetting and cauterizing the growth will frequently hold it long in check. His experience has confirmed Lomer's to the effect that the results are more favorable when there is fever afterward. There is certainly, he is convinced, a difference in the course of an open and a covered cancer. When he has covered the growth after an operation with a shield of mucosa, local recurrence was tardier than when it was left uncovered. Even when a palliative operation merely promotes cleanliness and rests the patient it is surely worth while. Martin had a patient live 54 months after curetting an inoperable cancer, Gebauer one who lived over five years, and Eyring had one who lived over three years. Chrobak performed 408 such palliative operations in his clinic between 1890 and 1900. In 1903, 7 of the women were still living, 2 after an interval of two or three years, 4 after three or four years and in 1 case of epithelioma of the cervix the patient lived eleven years after the palliative operation. Nine of the patients lived for three years, 4 for three or four, 2 for five or six, 1 for ten

and 1 for eleven years. In his private practice he had a patient survive for five years who required curetting of recurrences several times and was then lost to sight. In another case he curetted, in 1884, a carcinoma of the vaginal portion of the cervix encroaching on the vagina, in a woman of 32. The growth proved to be a soft, unusually vascular canceroid. Hemorrhage recurred a few months later, indicating a new scraping, and a recurring growth was curetted away in 1884. Since that date the growth has healed over completely, the patient is still in perfect health and has married a second time, although sterile in this latter marriage. In another case a carcinoma of the body of the uterus was curetted in 1888, there has been no recurrence to date. He has repeatedly kept patients in good health for six years by curetting at the first recurrence of symptoms, sometimes repeating the procedure eight or ten times on the same patient. These results are possible only in private practice. In the public hospitals the patients seldom return often enough, and if they learn the true nature of their trouble they are liable to resort to swindlers and quacks. He lays great stress on refraining from calling the scraping an "operation." The patient should be told that it is merely a harmless intervention which the family physician or the surgeon will possibly or probably have to repeat several times. The term "operation" frightens the patient too much, and she shrinks from a repetition of an operation. The family should always be fully informed in regard to the circumstances. In curetting he uses a large sharp spoon under general anesthesia, after careful disinfection, proceeding as rapidly as possible on account of the bleeding, which generally ceases when sound tissue is reached. He then takes a small sharp spoon and scrapes out the rest of the cancer in its remotest nooks, supporting the growth with the finger introduced in the rectum. When everything accessible has been scraped away he rinses and sponges the tissues dry and then cauterizes. He has used the actual cautery, but thinks that it does not penetrate into the crevices as well as a fluid caustic. The cancers which remained free from recurrence the longest were all cauterized with crude fuming nitric acid. He applies it on a stick or roll of asbestos, the asbestos fibers forming a brush or with a cotton wound stick. He never sprays the fluid, as it is liable to burn the sound skin or the physician's hands. Even the fumes are caustic and must be blown away. The scab is thrown off in two or three weeks, and granulating surface is left, whose healing can be promoted with iodine or silver nitrate solutions. Suspicious points can be treated again with the nitric acid or otherwise. There is always danger during curetting of perforating into the bladder, rectum or peritoneal cavity and the operation should not be undertaken until visual inspection of the bladder or rectum has shown that there is no extensive cancerous infiltration of the dividing wall. Perforation into the peritoneal cavity is not so dangerous as is generally supposed if it is recognized at once and further intervention suspended. After the cauterization, dry powder scattered in the vagina or applied on gauze will help to dry up the discharge better than attempting to keep the vagina clean by injections of astringents or disinfectants. They tend to keep up the discharge. In his experience the best powder for such local use is a combination of iodoform with tannin or charcoal. In conclusion he urges that in such a case the physician should conquer his personal diffidence and strive to keep the patient in his charge. In changing her physician she is liable to learn the true nature of her trouble, which may nullify all the previous efforts to save the doomed woman from despair.

60 Bullet Wound of Skull and Epilepsy—A young man witnessed the burning of his parents and in his grief seized a revolver and shot himself in the head. Splinters of bone were removed on several occasions afterward, as symptoms of transient paralysis and epilepsy developed, but two years after the accident a box fell from a height on the defect in the skull and severe chronic cortical epilepsy developed at once. The two places where there were gaps in the skull were closed with celluloid plates and the epilepsy vanished. The cure has been permanent for eight years to date.

63 Epidemic Cerebrospinal Meningitis—Weichselbaum states that during an epidemic there is always a possibility

that a few cases may be encountered which do not belong to the epidemic class. It seems to be an established fact, however, that the great or protracted epidemics of cerebrospinal meningitis are always due to the *Diplococcus intracellularis*.

65 Cholera Vibrios Without Cholera—The report of examination of cadavers of Mecca pilgrims has already been mentioned in these columns. In 6 out of 38 in which dysentery had been the cause of death, Prochnik found cholera vibrios without any evidences of cholera, past or present. Although harboring virulent cholera bacilli, the individuals had not become infected nor infected others, as not a case of cholera was known throughout the Mecca region during the season. The article is an interesting account by a medical man of the great Mecca pilgrimages. Prochnik is consul for the region and has charge of the sanitary regulations, with offices at Djeddah.

66 Fixation of Liver on Account of Cirrhosis—Nikolic describes a case of alcoholic cirrhosis of the liver in which hepatoxy was done by Czerny. The patient succumbed almost immediately to hemorrhage from the stomach. The pressure of the heavy overhanging liver on the stomach had interfered with its circulation and compressed the pylorus. A patch of necrosis resulted with erosion of the gastroduodenal artery. A protruding portion of the cirrhotic liver lay over the patch of necrosis and acted like a plug for the eroded vessel. When the heavy liver was raised up and fastened to the abdominal wall this removed the stopper over the injured vessel and also removed the obstacle to the circulation. The result was the fatal hematemesis. In another case the postoperative diagnosis was round ulcer of the stomach, with incipient cirrhosis of the liver. Treatment was by posterior gastroenterostomy and hepatoxy, and the patient made a smooth recovery and was soon dismissed.

71 Lymph Gland as Protecting Organ Against Tuberculosis—Bartel has been conducting researches to learn more about the incipient stages of tuberculosis infection and has arrived at various conclusions on the way. Among them is one to the effect that he can not be mistaken in assuming that the lymphocyte plays the principal part in the fight with the tubercle bacillus. The normal lymphocytes of an animal comparatively resistant to tuberculosis (sheep) are able to make virulent tubercle bacilli avirulent, which can then be injected into guinea pigs without resulting infection. Long contact is required in the test tubes before the virulence is thus abolished, but this corresponds to the long period of incubation or latency of tuberculosis infection in general. The avirulent tubercle bacilli after contact with the lymphocytes lose their destructive and chemotactic properties, also the power of proliferating, and he believes that they will prove an effectual vaccine material, inducing active immunity. He is convinced also that the lymphocyte-producing organs of animals thus actively immunized will elaborate a substance which will have an attenuating and inhibiting action on tuberculous affections in other animals. Further researches in this line are now under way.

72 Experimental Syphilis—Kraus has been experimenting with syphilis in monkeys, treating it according to the technique of the Pasteur treatment of hydrophobia. His experiences have been limited, but the impressions derived were decidedly favorable.

81 Diabetes Insipidus—Schmidt has been impressed with the constancy of constipation in the previous history of certain patients with diabetes insipidus and the remarkable subsidence of the polyuria when podophyllin was given. Defective skin functioning was another constant feature of the clinical picture. The artificial hyperemia induced by the drug in the intestines diverts the blood from the congested kidneys and gives the atonic kidney vessels a chance to recover their tone. Sweat baths may have the same kind of revulsive effect. Treatment of the cases of polyuria accompanied by diminished cutaneous function and constipation, should be directed to reducing the congestion in the kidneys resulting from loss of tone by the capillaries of the organ. Reduction of the intake of fluids will help, as also laxatives and diaphoretics. He prescribes 1 gm (about 15 grains) of podophyllin in 40 pills,

scientific and practical ushers him into the outside world as a plump and rosy baby. When was that baby born, a few minutes ago or nine months ago? Science and logic give one and the same answer. If birth means the act of coming into life, as the dictionaries tell us, unquestionably the baby under discussion came into life nine months ago, and at the end of that period simply changed its domicile. Why not, then, abolish the term conception, which is liable to be more or less misleading and confusing, especially to the lay mind, and substitute for it the more scientific and correct term, birth? This done then, the one term, delivery, either premature or at full term would adequately express the transition of the child from intrauterine to extrauterine life. Besides, the adoption of this nomenclature would help to clarify the entire subject of fetal life and would lead to the enunciation of definite, inflexible, and absolutely correct principles of jurisdiction applying thereto. If the baby in question is a living human being when delivered was it not a living human being the day before, the month before six months before, eight months and twenty-seven days before? Can a point of time between conjunction of the parental cells and the delivery of the child be fixed before which it did not possess the nature of a human being and after which it did possess the nature of a human being? Did its nature undergo any change between the time at which conjunction of the male and female germs occurred and that at which the baby appeared in the outside world? Was not the nature of the baby the same from the beginning to the ending of its uterine life? Was it not from first to last simply a question of the growth and development of one and the same being, and after the completion of the period of uterine life will it not continue to be a question of the growth and development of one and the same being up to physical maturity?

With these questions answered in the affirmative, as they must be, we are forced to concede that when in the red-hot furnace of congeniality two germs—male and female—are brought together that fuse themselves into one, a new being, crowned with humanity and mentality, comes into life. If this be true, does not the new being, from the first day of its uterine life, acquire a legal and moral status that entitles it to the same protection as that guaranteed to human beings in extrauterine life? Indeed, should it not receive greater protection, for the reason that to the nature of a human being it adds the condition of utter helplessness, a condition that should appeal in mute, but sublime eloquence to the manhood, the womanhood, and, above all, to the motherhood, of those who can shield and protect it? Lives there a man or woman who would assault and slay a little, laughing, prattling babe? If that be a crime from which the coldest-blooded villain would recoil, how much more a crime to assault and slay an innocent babe quietly sleeping in what should be an impregnable fortress—a babe whose voice is hushed and can not be raised in piteous cry for mercy or for help!

Objection to the use of the terms, birth and delivery, in the senses suggested, might be raised on several grounds. First, that it would involve the date of every birth in more or less uncertainty, secondly, that the fact of a birth could not be certainly known for four or five months after it had occurred, thirdly, that no practical benefit would result from the adoption of the proposed nomenclature. Admit that these objections are entitled to more or less weight, yet, when compared with the ad-

vantages that would accrue from the change of nomenclature proposed, the objections dwindle into insignificance. A simple formulation of the advantages will be sufficient to force conviction of the utility of the proposed nomenclature.

1 It would be essentially and scientifically correct to locate birth where and when it actually occurs, in spite of the fact that several months would usually elapse before it could be known that a birth had certainly taken place.

2 It would place a pregnancy, from the first day of its probable occurrence to its termination, on the high legal and moral grounds it deserves to occupy.

3 It would dignify the position of the *fetus in utero*, and would establish beyond all doubt or confusion the right of the fetus to the same protection, moral and legal, as is accorded to human beings who have completed the period of their uterine existences.

4 It would unify the terms, fluxion, abortion, and miscarriage, under the one term, premature delivery, then, two expressions, premature delivery and delivery at full term, would cover the entire subject.

5 It would enable lawmakers to enact clear and definite laws for the protection of the *fetus in utero*, which laws, jurists and juries could administer without doubt or confusion.

6 It would have a strong tendency to promote virtue and to prevent crime, and to build up in every community a positive demand for the protection of human life at its tenderest and most helpless period, it would tend to educate the people on a subject in reference to which they stand in great need of education and would thereby save the lives of many innocent and undelivered babes.

If the argument thus far be sound and tenable, does not the legal status of the fetus become clear and fixed? It is not strange that before science had ascertained the steps and stages of reproduction the law providing for the protection of the fetus should have been inadequate, but after these steps and stages became definitely established no inadequacy on this point should have prevailed. The common law is conspicuously defective in its provisions for the protection of the fetus. The following quotations on this point are made from the American and English Encyclopedia of law. "According to some authorities, it never was an act punishable at common law to commit abortion with the consent of the mother, provided it was done before the child became quick, but others are not disposed thus to restrict the criminal act, and hold that it may be committed at any stage of pregnancy. If the abortion was committed after quickening, it was punishable only as a misdemeanor. If done without the woman's consent, the act was held to constitute an aggravated assault."

Inasmuch as the common law was wholly inadequate for the protection of the fetus it became imperative that this defect should be supplied by statute law. Quoting from the same authority cited above, it is gratifying to find the following statement. "The statutes enacted on this subject in most of the states fail to draw any distinction between the commission of the offense, or attempt at commission, before and after the quickening of the child in the womb, making it a felony in either case. But some states still retain the distinction, punishing the act or attempt more severely when done after quickening. In Michigan it is essential that the child be quickened. The means denounced by the various statutes are the unlawful or malicious supplying, or ad-

ministering to a pregnant woman, or causing or procuring to be taken by her, any drug, poison, substance or noxious thing, or unlawfully using or causing to be used any instrument or other method whatsoever, with intent to procure or cause an abortion"

The statutes on this subject recognize the right of a physician to produce an abortion in the interest of the mother. The question arises: Should this right be exercised? Without undertaking to discuss the various conditions under which the exercise of this right might be considered, the broad proposition is laid down that the occasions on which it would become imperative to sacrifice the life of the child to save that of the mother are extremely rare. With the two great resources of rectal alimentation and Cesarean section at command, it is believed that practically every pregnancy can be safely carried to a point at which the life of the child may be saved. The methods and means of maintaining nutrition by rectal alimentation have been so perfected that the production of abortion, or of premature delivery, for gravid nausea should rarely or never be required. At all events, by this resource the woman ought to be carried to the point of certain viability of the child before premature delivery is resorted to. For deformed pelvis surgery, with its tremendous advances in skill and technique, offers in Cesarean section a resource for saving the life of the child, and at the same time of jeopardizing to such a small degree that of the mother, that it should be universally employed in such cases. Dr L L Hill, a surgeon of distinction in my state, and fully informed on these questions, furnished me recently the following statistics applying to Cesarean section: "1 Zweifel performed 76 Cesarean sections with 1 death (J Whitridge Williams, professor of obstetrics in the Johns Hopkins University, 1903). 2 In 1903 J Whitridge Williams collected the reports of 335 cases of Cesarean section by various operators, with a mortality of 6.87 per cent. 3 Not a single death of a mother occurred in 11 Cesarean sections recently performed at Johns Hopkins Hospital. 4 The mortality in Cesarean section should be about the same as that resulting from operations for simple ovarian tumor."

Without pursuing this discussion further, I submit to this Section the following propositions, and invite an expression of judgment thereon, not only by the individual members, but by the body:

1 The conjunction of male and female germs constitutes, from a scientific standpoint, birth.

2 The term conception should be abolished and that of birth substituted therefor.

3 In dealing with all stages of pregnancy, even the earliest, physicians should realize the extreme gravity of the condition, and should never condemn to death a fetus, however young, without the maturest consideration, and without calling to their aid the highest professional authority within reach, in a word, without carrying the case to the nearest and wisest medical supreme court accessible.

4 The principles herein contended for should be impressed on the members of the profession, taught to medical students and promulgated widely among the people.

5 Medical men should interest themselves to see that the statutes of their respective states are ample for the protection of the *fetus in utero*.

DISCUSSION

Dr H O MARCY, Boston, said that his opinions correspond with those of Dr Sanders. He believes that the conclusions

should be emphasized most positively. A physician may induce an abortion because he believes that the life of the mother is more valuable than the life of the fetus, but he should try to conserve the life of both to the best of his ability.

Dr W H SANDERS declared that it was not stated in the paper that abortion should never be brought about, but that it should be the result of very mature consideration and after consultation with the highest and wisest and most experienced authorities within reach.

STUDIES IN ROENTGEN RAY DIAGNOSIS OF CHEST DISEASES

JAMES E TALLEY, M D

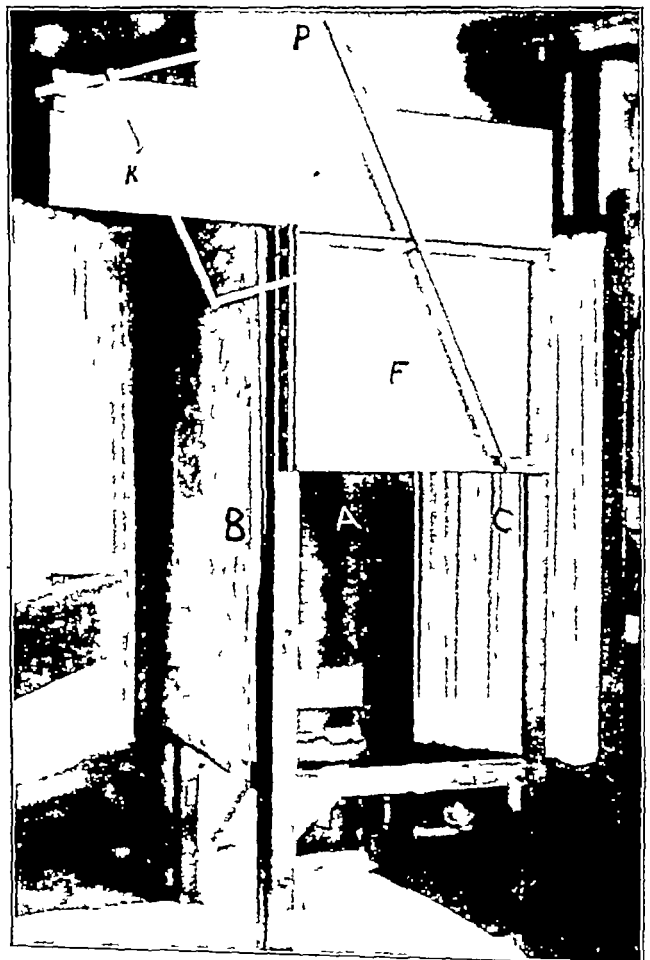
AND

WILLIAM S NEWCOMET, M D

PHILADELPHIA

I

The use of the Roentgen ray as an aid in the diagnosis of chest diseases has by no means received the attention that it justly merits. No doubt its neglect has been principally due to the fact that the expense is still a factor, and at the same time the danger from burns, which lately has been so grossly magnified, has deterred many who would have otherwise given their sanction, if not direct co-operation.



When the x-ray first came to be used, it seemed as if it was to be generally adopted for routine examinations in diseases of the chest, mainly through the use of the fluoroscope, but during the excitement many methods of examination were advised that consisted of so much detail that it served more to repel than to at-

tract those who were only passively interested. For instance, methods were advised to measure the density of pulmonary consolidations by such means as graduated metal scales, of different sorts, i. e., one layer of metal superimposed on another, different thicknesses of wire, or different sized perforations in a sheet of metal, and it was soon found that the personal equation was such a great factor that generally speaking, they were found to be useless and we hear very little about them. Besides the element of personal equation, other facts entered into the cause of error by the use of such apparatus.

The fluoroscope itself was soon found to be a rather fickle instrument. This was caused in the most part by its degeneration or variation in the salt from day to day. At the same time the variation of the x-ray tube, darkness of the room, the length of time the examiner has allowed his eyes to become accustomed to the darkness, etc., all enter into the cause of error, if not most minutely considered.

But as this field became more developed, it was found that the minute definitions were best studied from the radiograph and these must be made by an exposure of a few seconds or else the movements of the chest will destroy all that is to be gained. These are best made without the use of intensifying screens, as they also tend to destroy detail.

Previous to the introduction of these rapid plates it was found that we could study greater detail in the chest with the fluoroscope and at the same time it was well known that it was an easy matter to overlook a fracture of a bone with this same instrument, this was easily explained by the fact that the fluoroscope lacks minute definition and when it was necessary to expose a chest five or ten minutes for a picture we obtained even less detail. Yet the fluoroscope still has some use, for even from the best plates, with all possible technical imperfections eliminated we are unable to study the movements of the different organs and their modifications in disease, at the same time we can not obtain a view of the parts from several different positions in rapid succession and these points alone open up a field which give a great degree of usefulness.

The objection to the use of the fluoroscope is the risk of burn, and this must be carefully considered and the greatest precaution must be taken for both patient and physician. The former is likely to be given an acute burn, which is by no means agreeable, while the latter is more likely to suffer from what might be termed a chronic burn, which is more insidious and less active, though in the end the result is likely to last a lifetime, if not to terminate the existence of the individual.

To obviate this accident we have devised a simple screen for the protection of the operator, and at the same time it is used as a recording apparatus. The screen is made of wood in three sections, each section about 24 inches wide and 6 feet high. These hinge together with the ordinary L hinges, so they can be taken apart for convenience and stored. Each section is made to hook rigidly at right angles with its fellow, thus if a fourth side was added it would form a square-shaped pyramid. By leaving one side open the patient can easily be placed in position or removed as desired. Two sides of the screen are covered with metal, thin sheet lead is best. In one is a movable window for the fluoroscope, and it might be here stated that the fluoroscope should be large enough to give a shadow of the whole chest without being moved. Small fluoroscopes

are useless and even dangerous. The third side is not covered with metal, but simply with black paper to enclose the x-ray tube and thereby lessen the light in the room, and at the same time to act as a frame for measurements and plumb lines used for centering the x-ray tube. The fact that no metal is on this side lessens the danger for puncture. The side directly opposite has the frame for the fluoroscope adjustable for different positions, depending on the patient's condition. Over the fluoroscope is placed a piece of plate glass, which is transparent to light rays, but blocks the x-ray to a great extent. At the same time it serves another purpose, in protecting the screen from being scratched by the point of the pantograph, which is used for recording the conditions as they exist. The pantograph is firmly attached to the same side of the screen on a soft piece of wood, so that paper can be easily placed under the pencil by a few thumb tacks. The tracing on the glass over the fluoroscope will be thus easily recorded, about one-sixth its natural size, which is very convenient for records. It is best to have this instrument attached to the side, not to the protecting connecting side, as it will lessen the danger of the operator's coming in the range of the active ray.

To minimize the amount of danger to the patient a cardinal rule must be adopted not to expose the body to the ray longer than is consistent with a thorough examination and not to re-examine at too close range; second, to use only enough energy to penetrate the body, which is much less in a dark room than in one only semi-dark, and at the same time the eye must be accustomed to the darkness, third, to keep the x-ray tube at least a foot from the body, and 18 inches is still better. Besides lessening the danger of burn, there is also less distortion of the shadows on the screen. Unfortunately, in heavy subjects it will be found that 18 inches is too far away for a good penetration. The use of a large fluoroscope that will cover the whole chest is here again explained.

II

Though we have examined a considerable series of cases, a large proportion of which Dr. Musser has put at our disposal from both his ward and his private practice at the Presbyterian Hospital, we do not claim to add anything to the general principles and findings as set forth by others in the same field. We simply wish to add our testimony as to the usefulness of this means of diagnosis in thoracic diseases, to mention our simple means of securing records of fluoroscopic shadows, which Dr. Newcomet has described and pictured above, and to refer to a few cases where this method has shown its superiority either in point of time or precision, or both.

The drawbacks to the fluoroscopic work are the necessity of doing it at night to insure a sufficiently dark room, and the pavillion system of hospital construction, which renders difficult or impossible the examination of many acutely ill patients. The Roentgen examination must be considered a supplementary means of diagnosis and its findings interpreted solely in connection with the data obtained by the history and all other means at our disposal. For instance, a shadow showing involvement of a part of one lung may mean tuberculosis, pneumonia, pleurisy, loculated effusion or new growth, and only the history of the case and the other means of diagnosis enable us to say definitely which it is. Thus used, it will put inspection on a level at least with percussion in pulmonary disease. In fact, inspection,

as represented by both fluoroscope and skiagraph, when brought into direct contrast with percussion, in many conditions appears to us to have a decided advantage. It is but the outcome of the higher development of the sense of sight, as compared with the sense of touch, in the ordinary individual. A pneumonia or tuberculosis beginning deep in the chest may be revealed by the x -ray examination before other signs and symptoms are conclusive. A not infrequent type of case is like the following. A woman of 30, anemic looking, troubled with cough and recurring diarrhea, was examined by us. Her general appearance, the cough and the family history strongly suggested tuberculosis, but there was no sputum in which to seek tubercle bacilli and no evening fever. A systematic examination of the chest on two occasions by the ordinary means gave no satisfactory evidence of consolidation, and it seemed necessary to accept the enteritis as probably the only cause of the trouble so far, but it failed to explain the cough satisfactorily. The Roentgen examination with the screen at first showed only a suspicion of a darkening at the level of the inferior angle of the left scapula. Three weeks later, on her return from an outing, this area had increased and was now recognizable by compression and auscultation. In her case the x -ray gave a clue to the spot on which to center the attention before the examiner had been keen enough to light on it by other means.

About a year ago, when typhoid was rather prevalent, a girl of about 18, whose mother had a fibroid process in one lung and whose brother had had incipient tuberculosis, developed a moderate fever after feeling more or less ill for two weeks. A quick and definite decision was imperative, as a journey to the South Pacific had been arranged and the time for sailing was at hand. All known means of differential diagnosis were used except the Roentgen which, in the light of later experience, would probably have been the most useful. Largely because of the strong family predisposition and the failure of any further typhoidal symptoms to develop, she was allowed to sail. On her return, as she had not gained, and as the right upper lobe now showed slight jerky inspiration, she was subjected to the Roentgen examination. The number of enlarged lymph glands lying beside the middle shadow, which were evident even on the screen, showed at once where the trouble was from the first, and had we used the x -rays at that time we should probably have sent her off with less misgiving. In fact, the detection of enlarged mediastinal glands has seemed to us one of the most useful provinces of the x -ray. In children it is specially applicable because of their thin chests, though we have used both skiagraph and skigram successfully and frequently with adults. In no class of cases has it served us better than in making an early diagnosis of secondary involvement of the mediastinal glands coming on after the removal of the breast for carcinoma. Within a few weeks in two quite corpulent women, each of whom had a breast removed less than two years ago, by means of skigrams we have been able to give a positive diagnosis at a time when the only symptoms were apprehensive nervousness, some pain and slight dyspnea. That we were right the further history is unfolding. At present one case has some facial cyanosis, and the glands of the other are evident to percussion now that we know where to seek most carefully. In Hodgkin's disease we have been able to detect by both screen and skigram the continuation of the enlarged glands of the neck into the thorax.

As said before, in acute diseases like pneumonia, we have not been able to examine cases as a routine measure. However, a method which presents to the eye both the shadow and the extent of consolidation both before and long after it is discernible by auscultation and percussion, and which alone shows the impaired movement of the diaphragm, is specially serviceable in atypical cases like central and senile pneumonia.

In pleurisy with effusion, the revelation to the eye of the dark shadow with its movable level, the displaced heart and the blotted-out diaphragm on the affected side, must add precision to the diagnosis.

Dr John M McLean has very kindly just furnished us a case of new growth of the thorax in a young man for examination. The case had been diagnosed by several physicians at first as pleurisy with effusion, as the signs were typical of that condition. The Roentgen examination gives a picture like a large effusion, with wide displacement of the heart. Two points differentiate it from diffusion. First, at rest the dark shadow at the right continuous with the heart gradually decreases in density toward the left. Second, on full inspiration the mass lights up irregularly, one or two areas being quite translucent.

As an example of the usefulness of this method in the exact location of pathologic lesions, we may cite a case of interlobar empyema following pneumonia, which we were able definitely to locate as lying posteriorly between the right upper and lower lobes.

Nowhere does the screen give livelier satisfaction than in the study of the heart and great vessels of the thorax. Here the fluoroscope shows the living, pulsating organ, while the skiagraph reminds one of a composite photograph, the sharpness of outline being lost because of the movement of pulsation. This is lessened in the instantaneous skiagraph, but the screen alone will show us the moving heart. The shape, size and position of the heart we have been able to determine by the skiagraph in at least two cases where the muscular development was so tremendous as to prevent entirely the casting of a sufficiently distinct image in the screen. In these cases, both men, the marked muscularity as well as fat, made percussion and even auscultation of comparatively little use. The absence of shadows suggestive of aneurism, and the normal position of the heart, with greatly increased transverse diameter, taken in connection with the history of the case, made dilatation due to excessive exercise the most probable explanation of the dyspnea and arrhythmia. The examination of the heart by the screen after outlining it by percussion shows the relative limitation of percussion and reveals the greater accuracy of the outline made by the pantographic arrangement above described. Since the heart lies comparatively near the screen, the shadow is relatively accurate, and any increase or decrease in size or change in position can easily be recorded by pantographic tracings at intervals, the technique being constant.

A neurotic young woman from Dr Mitchell's service was referred to us for examination by Dr Cornell. There was a history of spells of dyspnea at intervals, which seemed too genuine to be considered simply hysterical. The heart when examined by the usual methods showed only a pulmonic systolic murmur, which was considered functional. There was nothing in the pulmonary, cardiac, renal or blood examinations to explain the attacks. The fluoroscope showed the small-

est heart that we have ever seen in a woman of her weight and physique. Evidently it was a case of congenital hypoplasia. There was enough cardiac energy for existence, but no reserve for the requirements of an ordinarily active life. That anyone would have diagnosed the condition satisfactorily by percussion we doubt. The form of the heart in the organic lesion takes a certain type in one's mind. The wider transverse diameter of the mitral lesions and the elongated shadow of the aortic lesion are really reducible to definite diagrams. The constant darkening of the pulmonary reflex in mitral disease as compared with aortic disease is a diagnostic point between the two conditions. The obstructed pulmonary circulation is the cause. The distended right auricle would come into prominence more often were it not for the fact that in just the conditions where it is most overfilled (except emphysema) the pulmonary shadow is deepest and obscures the auricle.

A rather thin boy of ten years afforded us the most prominent left auricle that we have seen. The lesion was evidently mitral insufficiency, but the fullness of the left auricle and the depth of the sulcus between auricle and ventricle we had never seen so marked before both in skiagraph and on the screen. A natural deviation of the heart, as well as an over-filled auricle must have been the explanation, as in mitral disease ordinarily no such marked auricular shadow was seen. Changes in position of the heart could not be better demonstrated than in some four cases of mitral diseases with secondary tricuspid insufficiency and enlarged left lobe of the liver. The lateral enlargement of the heart was conspicuous, but the wide change toward a horizontal position supported by the diaphragm and left lobe was remarkable. That the so-called apex could be so far displaced as to cause a diffuse pulsation well up toward the axilla and beyond the anterior axillary line could be understood when a goodly part of the left ventricle was seen to strike the thorax wall at each beat. With the recovery of compensation under rest and digitalis the heart assumed again more nearly the vertical position on full inspiration.

The number of aneurisms at our disposal has been small, but their fluoroscopic study helpful. In at least two cases we have noted an unusual projection to the left of the descending part of the arch of the aorta. They suggested dilatation of the aorta or small aneurisms, though there were no reasons for suspecting either. In one case the thorax was normal, in the other there was fibroid tuberculosis of the right upper lobe. A possible explanation is that the solidified lung offered less opportunity for the vessels to sink into its substance in inspiration. They interested us as illustrating that the part of the descending aorta visible on the screen varies, and one should not be misled into pronouncing such variations aneurisms. In a case of aneurism of the descending aorta there was enough enlargement of outline in pulsation to differentiate it from other possible consolidations, as enlarged glands. The skiagraph was better in detail, but of course could show no pulsation. In case of complete coagulation in the sac the simple movement due to pulsation without enlargement of outline in the shadow makes it difficult, if not impossible, to say decisively whether one is dealing with an aneurism or some other solid body, as an enlarged gland. In such cases the image is helpful, and the differential diagnosis, as before emphasized, must rest on the entire findings of the case.

An aneurism apparently beginning in the innominate

and involving the subclavian was shown by the skiagraph more conclusively than could have been done by percussion, to involve the aorta proper, thus putting operation out of the question.

In conclusion, we believe that a method that is rarely, if ever, inferior to other methods, usually at least equal to them and sometimes superior, is bound to have a wider recognition and use than at present.

THE EFFECTS OF OSMIC ACID INJECTIONS

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Billroth and Neuber¹ were the first to employ osmic acid for neuralgia. They used repeated injections by puncture through the skin without exposure of the nerve, as many as twenty injections were given in some cases. Eulenburg,² employing a similar method, had good results in only 3 out of 13 cases, which included neuralgias of the brachial, sciatic and trigeminal nerves. Schapiro,³ who used a 1 per cent solution of osmic acid in glycerin and water, records 5 successes out of 8 cases at periods of two to six months after injection. Jacoby⁴ claims 8 cases of cure out of 18 sciaticas, and warns us that it is "dangerous to implicate a motor nerve." Cohen⁵ of Philadelphia used repeated injections (without exposure) into the sciatic nerve, using as much as 30 minims of a 1 per cent. solution. Ellis⁶ records the occurrence of some irritation after injection into a thumb in which pain followed a sprain. Mercer⁷ injected deeply and repeatedly into the sciatic region, with temporary relief and no ill effects. Frank⁸ obtained three successes by direct injection. Turner⁹ records a case of trigeminal neuralgia of two years' standing in which he injected into the infraorbital and after ten days relief followed, lasting six months, i. e., to the date when the patient was last seen.

Wright¹⁰ claims that most surgeons who have used osmic acid have injected it more or less at random without exposing the nerve trunk. He further states that such a method is quite sufficient to account for irregular and defective results and that it is also remarkable that so little is said of any ill effects, considering the very marked changes that osmic acid produces in the tissues, as shown experimentally by Frankel and as seen by himself in a case in which he used injections, and which, on removal of a portion of muscle which had been attacked by the acid, showed marked degenerative myositis. In all his cases Wright had exposed the nerve and had injected a 1.5 or 2 per cent. watery solution into the trunk or into branches, sometimes the injection had been both toward the periphery and toward the center, and the acid had generally escaped more or less freely into the tissues immediately around the nerve. Most of this author's cases were much too recent to justify any conclusion as to the permanent value of the method. He contends that it is impossible to eliminate the effect of the exposure and the mechanical results of manipulation and puncture of the nerve and of occasional unintentional section by the trephine.

He deems it clear that if this method is employed, the nerve should be fully exposed and not merely a

1 Lancet, 1885, vol 1, p 1096
2 Lancet, 1884, vol 1, p 443

3 Lancet, 1885, vol 11

4 Practitioner, 1889, vol 11, p 373

5 Lancet, 1885, vol 1, p 58

6 Year Book of Treatment, 1898, p 76

7 Med Soc. Trans., 1898, p 357

8 Med Chron., Manchester, 1903-1904, pp 291 to 300

chance injection made through the skin. Immediate results in his cases as regards both harmlessness and at least temporary relief quite justify the use of the plan before resorting to any such severe procedure as excision of the Gasserian ganglion. He preferred to expose and inject the trunk in some cases rather than to deal with the terminals only, and this is a matter that should be settled, since the severity of the one procedure is of course much greater than that of the other. It is also of importance to remember that delay in relief may occur, i. e., that pain may continue for some days or even longer after the injection and then pass off. So that it is not necessary to assume failure or to repeat the operation until time has been given to make sure that it is necessary.

Wright⁹ reports a case of a male, aged 33, who suffered for three years with pain in the testes. The right testis was removed, after which pain persisted in the left testis and cord. Osmic acid was injected into the tissues of the cord, with improvement. In another case, that of a male, aged 31, a postman, there was pain in the left heel, interfering with walking. The posterior tibial nerve was injected with osmic acid. The result was a failure. Wright several times injected the lingual and inferior dental nerve after trephining the lower jaw, with indifferent results. In the majority of these cases, there was return of pain after, at most, a few months. He secured temporary relief by injecting a 2 per cent solution of osmic acid into the auriculotemporal nerve.

Up to November, 1899, W. H. Bennett⁹ had treated 12 cases of neuralgia, involving various nerve trunks, by injections of a 1 per cent solution, using 10 to 12 minims for each nerve trunk. The symptoms were relieved in a few hours and in all cases the cure seemed to be complete. In Bennett's cases the median, popliteal, peroneal, and the branches of the trigeminal nerve were injected. Bennett believes that the results will be better if the injections of osmic acid be applied early in the course of the disease.

In a personal letter to Dr. J. B. Murphy,¹⁰ Bennett reviews 8 additional cases, making 20 in all. Of these 20 cases, 18 experienced complete relief. The time elapsing between operation and report, however, was, it should be noted, in several cases, very short.

Murphy¹¹ reported 14 cases in which osmic acid was injected, in a 1 to 2 per cent. solution, into nerve trunks for neuralgia. He found that the injections relieved the pain immediately and for a long period of time. He advised against injection into the superficial tissue for peripheral neuralgia, as the nerve trunks were easily located. He advised also against injection into a motor nerve or a motor nerve area and, therefore, never into a spinal nerve except in amputation stumps. Murphy found local necrosis of tissue about the injected nerve and even the wall of the foramen showed necrotic changes occasionally. The necrosis did not suppurate except in cases exposed to marked infection. In the douloureux he advocates injection into all branches, including the palatine, lingual, mandibular, supra-orbital and infra-orbital. He calls attention to the fact that there may be two or three divisions of the supra-orbital and that each should be searched for and injected separately. He advises the use of a general anesthetic.

Judging theoretically from experience in resections

and ganglion operations, Murphy believes that the relief will not be permanent after the injection of osmic acid. Clinical experience up to date, however, particularly the experience of Mr. Bennett and himself, leads him to believe that many cases are really permanently cured. While he admits that time alone can determine the final results, he commends the injection of osmic acid because of its ease of application, its nil mortality and its immediate results. Murphy reports no injections of osmic acid for conditions other than the douloureux. In these cases he injected osmic acid in a solution of 1 to 2 per cent, 10 minims into each trunk.

AUTHOR'S CASES

I have injected osmic acid for neuralgia eleven times in nine patients, as follows:

CASE 1—History—Mrs. W., aged 71 years, was first seen on July 12, 1904. The case was one of typical intense tic douloureux involving the right side of the face. The first paroxysm occurred about ten years previously, subsequent attacks gradually becoming more frequent and more severe. Practically all of the many remedies recommended for the relief of this condition had been tried without benefit. For almost three months prior to the operation the pain had been excruciating, the attacks occurring with exhausting frequency. The whole right side of the face was exquisitely tender, particularly in the neighborhood of the infra-orbital and mental foramina. The tongue was sore and tender at all times, thus greatly interfering with speech. During attacks the pain most acute about the right angle of the mouth and the angle of the right jaw. Violent spasm of the buccinator was almost constantly present during the attacks.

Treatment—A 2 per cent solution of osmic acid was injected into the supra-orbital, infra-orbital and inferior-dental nerves at the supra-orbital notch and the infra-orbital and mental foramina. The manner of operation was that practiced by Murphy. Ten drops of a 2 per cent solution of the osmic acid were injected into each branch and two or three drops were forced into the perineural fat of each foramen around the nerve. At the time of the injection of the osmic acid the nerves were drawn with very slight force from the foramina and held during the injection, but the trunks were not stretched as in the operation of neurectasy.

Result—Up to the present time there has been no return of the pain since its abatement one week after the operation. During the first week several rather severe paroxysms occurred, these gradually decreasing in severity.

Urinalysis—An interesting feature of the case was the nephritis occasioned by the elimination of the acid. The urine passed during the first twelve hours succeeding the operation showed nothing unusual, on the second day, however, nephritis resulted. There were no symptoms, either subjective or objective, pointing to its onset or presence, excepting the appearance of and findings in the urine. The patient did not complain of pain in the loins. Urine passed thirty-six hours after the operation showed the following: Reaction, very slightly acid, sp. gr. 1.036, color, dark claret. The specimen was centrifugated and the sediment composed a little over a quarter of the volume. The clear fluid above the sediment was light claret in color the sediment being dark red. Examination of the fluid portion showed a small amount of albumin, with no sugar, bile or other abnormal substance present. Examination of the sediment showed it to be composed almost entirely of red blood cells. There were no casts, epithelial cells or pus cells. The red blood cells disappeared from the urine on the fourth day.

CASE 2—History—Miss L., aged 22, had suffered pain, paroxysmal in character, for four or five years. Only the area supplied by the inferior dental branch was involved. Paroxysms had increased in frequency during the last few weeks before operation until the pain was almost continuous, and the region of the lower jaw on the right side was very tender.

Treatment—On Oct. 10, 1904 ten drops of a 2 per cent solution of osmic acid were injected into the trunk of the

⁹ Lancet Nov. 4, 1899.

¹⁰ The Journal A. M. A. Oct. 8, 1904.

¹¹ Journal A. M. A., Oct. 8, 1904.

inferior dental nerve at the mental foramen, and a few drops were forced into the perineurial fat around the nerve.

Result—Pain persisted for two weeks after injection and then abated and up to the present time has not returned.

CASE 3—History—Mr. B, aged 27, had had sharp pain for eighteen months in the area supplied by the supra orbital and auriculotemporal branches. The superior maxillary and inferior dental trunks were not involved.

Treatment—Open operation was refused and twenty drops of a 2 per cent solution of osmic acid were injected subcutaneously along the course of the trunk and branches of the auriculotemporal nerve. Ten drops of a 2 per cent solution were also injected at the supra orbital notch.

Result—There was almost complete relief from pain for a period of two months, after which the pain recurred somewhat reduced in severity.

CASE 4—History—Mrs. S, aged 41, had had violent pain in the area supplied by the inferior dental and infra orbital branches for eight years, the paroxysms gradually increasing in severity and in frequency.

Treatment—On Feb. 15, 1905, ten drops of a 2 per cent solution were injected into the involved trunks at their respective foramina.

Result—Pain persisted in both regions without much abatement for ten days after which it gradually disappeared and had not returned when patient died three months later of cerebral hemorrhage. There was no autopsy.

CASE 5—History—Mrs. H, aged 71 years, exhibited intense tic douloureux involving the right side of the face the first attack having occurred twenty years previously, subsequent attacks gradually increasing in severity and in frequency.

Treatment—On July 5, 1901 a 2 per cent solution of osmic acid was injected into the supra orbital, infra orbital and inferior dental nerves at their respective superficial foramina of exit. Ten drops of a 2 per cent solution were injected into each branch and a few drops spilled on the perineurial fat.

Result—The pain persisted for two weeks after which it abated and did not reappear until the following July one year later, at which time the pain appeared in the area supplied by the inferior dental branch only. Under cocaine anesthesia ten drops of a 2 per cent solution of osmic acid were now introduced through a hypodermic needle directly into the large mental foramen without incision with the result that the pain disappeared for ten days at the end of which time it reappeared in this branch. An incision was then made and the trunk injected the pain continuing for one week, after which it practically ceased. The last operation in this case was done on July 25, 1905.

CASE 6—History—Mr. J, 55 years old, had suffered for about ten years with sciatic neuralgia and had tried all the more common medicinal methods of treatment of this disease.

Treatment—Osmic acid in a 2 per cent solution was injected subcutaneously at three points along the course of the sciatic nerve on two occasions, one month apart.

Result—Each time there was slight temporary benefit. The effect was no more pronounced and no more lasting than that which had been produced by injections of them in two grain doses in a similar manner in the same case.

CASE 7—History—Mrs. C, 35 years old, suffered with neuralgia, implicating the infra orbital and auriculotemporal branches.

Treatment—On March 12, 1904, osmic acid, 2 per cent solution, was injected ten drops over the infra orbital foramen and ten drops subcutaneously in the area supplied by the auriculotemporal nerve.

Result—Partial relief, lasting to the present time.

Cases 8 and 9 were simple subcutaneous injections of osmic acid 2 per cent solution, under cocaine anesthesia. The injection, in each instance, was into the infra-orbital and mental foramen. The results were unsatisfactory.

CHANGES PRODUCED IN THE TISSUES BY OSMIC ACID

Frankel¹² of Hamburg found, experimentally in animals, destruction of axis cylinders and degeneration of

white substance with epineuritis and myositis as the result of his injections.

Murphy found, on microscopic examination, the most important changes at and distal to the point of injection. The degree of pathologic alteration varied to a considerable extent, dependent on the thoroughness of the injection and whether infection had resulted. At the point of injection there was always more or less staining of the perineurial and interstitial fat with the osmic acid. There was marked derangement of the fibers. The inflammatory reaction was always less extensive than might naturally be expected. An occasional area of focal necrosis, a few foci of round-cell infiltration, and here and there a leucocyte, attracted thither by the foreign substance, were all that was to be noted.

Distal to the point of injection the nerve trunk, in some cases, seemed atrophic, but there was no interstitial changes. Proximally, no changes were to be found except in the immediate vicinity of the injection. At and distal to the point of injection, there was more or less extensive fatty degeneration of the myelin sheath. This varied in amount from the involvement of all the fibers to degeneration of an occasional fiber only. Proximally, the myelin sheath was unaffected except immediately above the limit of blackening, which was the means of defining the extent of the injected area.

INVESTIGATION¹³ INTO THE NATURE OF THE TISSUE CHANGES PRODUCED BY OSMIC ACID.

EXPERIMENT 1—Adult rabbit

April 2, 1905—Injected into deep tissues of left hind leg five drops of a 2 per cent solution of osmic acid freshly prepared. Rabbit allowed to go free ten days. No paralysis developed. No clinical changes.

April 13—Exposed left sciatic nerve and injected five drops of a 2 per cent solution osmic acid directly into substance of nerve. Nerve and surrounding structures blackened. Skin incision closed with catgut sutures.

April 15—Paralysis developed, which continued until rabbit was killed.

April 26—Chloroformed.

EXPERIMENT 2—Puppy, four months old

August 13—Injected left sciatic nerve with a 2 per cent solution freshly prepared osmic acid. Five drops injected with very little loss of acid into surrounding structures. Nerve at once blackened by acid. Suture closed by catgut.

August 15—Paralysis developed. Dog carried foot.

August 18—Paralysis improved.

August 20—Paralysis practically disappeared. Nutrition good.

August 20—Dog killed by chloroform.

EXPERIMENT 3—Small rabbit, three months old

August 14—Injected both sciatic nerves with a 2 per cent solution of osmic acid, using five drops to each nerve. Some acid lost in surrounding tissues. Nerves and surrounding tissues blackened by acid at time of injection.

August 15—Paralysis of both legs.

August 17—Continued paralysis. Rabbit dragged legs. Nutrition poor.

August 18—Rabbit died with paralysis persistent. Wounds not infected.

EXPERIMENT 4—Adult rabbit

August 14—Left sciatic nerve injected with a 2 per cent solution osmic acid. Nerve and surrounding tissues blackened.

August 16—Paralysis developed.

August 18—Paralysis continued. Sutures catgut still in situ. Wound infected.

August 20—Rabbit killed by chloroform.

EXPERIMENT 5—Large rabbit

¹³ Made, under the author's directions, by Dr. Everett B. Padgett.

August 13—Injected both left sciatic nerves and cords of right brachial plexus with a 2 per cent solution of osmic acid, using five drops in each injection. Skin sutured with catgut.

August 15—Developed slight paralysis of left hind leg, which improved before rabbit was killed. No paralysis in fore leg.

August 20—Rabbit killed by chloroform.

EXPERIMENT 6—Large rabbit.

August 20—Injected both sciatic nerves and also deep muscles of fore leg with a 2 per cent. solution of osmic acid. Wounds closed with catgut. Nerves blackened.

August 23—Paralysis of both hind legs. No paralysis of fore legs. Wound on left hind leg infected.

POSTMORTEM, GROSS AND MICROSCOPIC EXAMINATIONS—Parts of tissue were removed from the various organs, hardened in formalin, and stained after the following methods:

A GENERAL STAINS—1 Hematoxylin and eosin, the eosin being very heavy 2 Borax carmine. 3 Van Gieson.

B SPECIAL STAINS—1 Nerves a Myelin sheath stains as Paul Weigert's b Stain for neuroglia fibers bb Phosphotungstic-acid hematoxylin.

EXPERIMENT 1—GROSS ANATOMIC FINDINGS

NERVE, LEFT SCIATIC

	At Site of Injection	Proximal	Distal
Size	Diminished in caliber	Diminished	Diminished
Color	Very dark	Gradually becoming lighter	Gradually becoming lighter
Consistency	Softer than normal	Softer than normal	Softer than normal

SURROUNDING TISSUES

	At Site of Injection	Proximal	Distal
Color	Dark brown	Shading to normal	Shading to normal
Infection	Absent	Absent	Absent
Inflammatory nodules	Present	Present	Present

OTHER ORGANS

The voluntary muscles were inflamed at the site of the injection and also proximally and distally. The heart, liver, lungs and spleen were normal.

MICROSCOPIC FINDINGS

NERVE, LEFT SCIATIC

	At Site of Injection	Proximal	Distal
Perineurial fat	Stained	Stained	Stained
Axial cylinder	Normal	Normal	Normal
Myelin sheath	Degenerated	Degenerated	Degenerated
Nodes of Ranvier	Stain less plainly	Stain less plainly	Stain less plainly
Caliber	Diminished	Diminished	Diminished
Focal necrosis	Present	Present	Present
Staining qualities	Less than normal	Less than normal	Less than normal

OTHER ORGANS

The heart showed myositis and round celled infiltration. The liver and spleen were normal, the muscles about the site of injection showed inflammatory changes.

EXPERIMENT 2—GROSS ANATOMIC FINDINGS

NERVE, LEFT SCIATIC

	At Site of Injection	Proximal	Distal
Size	Diminished in caliber	Diminished	Diminished
Color	Very dark	Lighter in color	Lighter in color
Consistency	Softer than normal	Softer	Lighter in color

SURROUNDING TISSUES

	At Site of Injection	Proximal	Distal
Color	Dark brown	Shading to normal	Shading to normal
Infection	Absent	Absent	Absent
Inflammatory thickening	Absent	Absent	Absent

OTHER ORGANS

The voluntary muscles were inflamed at all points. The heart showed myositis; the liver was normal.

MICROSCOPIC FINDINGS

NERVE, LEFT SCIATIC

	At Site of Injection	Proximal	Distal
Perineurial fat	Stained	Stained	Stained
Fibers	Normal	Normal	Normal
Myelin sheath	Slight	Slight	Slight
Degenerated	Stain poorly	Stain poorly	Stain poorly
Nodes of Ranvier	Diminished	Diminished	Diminished
Caliber	Very slight	Very slight	Very slight
Focal necrosis	Less than normal	Less than normal	Less than normal
Staining qualities	Less than normal	Less than normal	Less than normal

OTHER ORGANS

The heart showed myositis; the liver was normal. Muscles at site of injection, showed inflammatory changes, striated muscle of opposite leg was normal.

EXPERIMENT 4—GROSS AUTOMATIC FINDINGS

NERVE, LEFT SCIATIC

	At Site of Injection	Proximal	Distal
Size	Diminished	Diminished	Diminished
Color	Very dark	Lighter	Lighter
Consistency	Softer than normal	Softer than normal	Softer than normal

SURROUNDING TISSUE

	At Site of Injection	Proximal	Distal
Color	Dark brown	Lighter	Lighter
Infection	Present	Present	Present
Inflammatory exudate	Present	Absent	Absent

OTHER ORGANS

The heart, liver and spleen were normal.

MICROSCOPIC FINDINGS

NERVE, LEFT SCIATIC

	At Site of Injection	Proximal	Distal
Perineurial fat	Stained	Stained	Stained
Axial cylinder	Normal	Normal	Normal
Nodes of Ranvier	Stain less plainly	Stain less plainly	Stain less plainly
Caliber	Diminished	Diminished	Diminished
Focal necrosis	Absent	Absent	Absent
Staining quality	Less than normal	Less than normal	Less than normal

OTHER ORGANS

The heart showed myositis; the liver was normal, the muscle at site of injection was degenerated.

EXPERIMENT 5—GROSS ANATOMIC FINDINGS

NERVE BRACHIAL PLEXUS

	At Site of Injection	Proximal	Distal
Size	Diminished in caliber	Diminished	Diminished
Color	Very dark	Becoming lighter	Lighter
Consistency	Softer than normal	Softer than normal	Softer than normal

SURROUNDING TISSUE

	At Site of Injection	Proximal	Distal
Color	Dark brown	Disappearing	Disappearing
Infection	Absent	Absent	Absent
Inflammatory exudate	Present	Present	Present

OTHER ORGANS

The heart showed myositis; the liver, lungs and other muscles were normal.

MICROSCOPIC FINDINGS

NERVE BRACHIAL PLEXUS

	At Site of Injection.	Proximal	Distal
Perineurial fat	Stained	Stained	Stained
Axis cylinder	Normal	Normal	Normal
Nodes of Ranvier	Stain less plainly	Stain less plainly	Stain less plainly
Caliber	Diminished	Diminished	Diminished
Staining quality	Less than normal	Less than normal	Less than normal

OTHER ORGANS

The heart showed myositis; the liver was normal, the muscles about the site of injection showed inflammatory changes.

EXPERIMENT 6—GROSS ANATOMIC FINDINGS

NERVE BOTH SCIATICS

	At Site of Injection	Proximal	Distal
Size	Diminished in caliber	Diminished	Diminished
Color	Very dark	Lighter	Lighter
Consistency	Softer than normal	Soft	Soft

SURROUNDING TISSUES

	At Site of Injection	Proximal	Distal
Color	Dark brown	Disappearing	Disappearing
Infection	Present	Present	Present

OTHER ORGANS

	At Site of Injection	Proximal	Distal
Voluntary muscles	Inflamed	Absent	Absent

The heart showed myositis; the liver and spleen were normal. In the brain examination of the corpora quadrigemina, the cerebral cortex and the medulla oblongata showed them to be normal. The color of the deep structures of fore leg was very dark involving muscle tissue, tendons, ligaments and periosteum but infection and inflammatory changes were absent.

MICROSCOPIC FINDINGS

NERVES BOTH SCIATICS

	At Site of Injection	Proximal	Distal
Perineurial fat	Stained	Stained	Stained
Axis cylinder	Normal	Normal	Normal
Myelin sheath	Stains poorly	Stains poorly	Stains poorly
Caliber	Diminished	Diminished	Diminished
Focal necrosis	Local necrosis	Focal necrosis	Local necrosis
Staining quality	Less than normal	Less than normal	Less than normal

OTHER ORGANS

In the brain the corpora quadrigemina, the medulla oblongata and the cerebral cortex were normal. The heart and liver were normal. In the muscles at the site of injection the tissues were dark, the nuclei, clearly visible, the sheath of muscle fibers visible, the protoplasm, stained poorly; the different parts could not be made out, inflammatory changes were present. The tendons showed inflammatory changes.

CONCLUSIONS

1 The injection of 10 drops of osmic acid in 2 per cent solution into sensory nerve trunks is safe. The likelihood of irritation of the kidney, however, should not be forgotten in cases exhibiting kidney lesions. It is not probable that the death from cerebral hemorrhage three months after injection of the acid was due in any sense to the injection.

2 Injections into the inferior dental or other nerves should be made through the mouth, since infection of the wound and necrosis may result, with consequent failure in the action of the acid.

3 Immediate relief should not always be expected, notwithstanding the cases of Bennett and Murphy were all immediately relieved. No one of my cases, even those in which the acid was accurately injected into the nerve trunks and into the perineurial fat, was promptly relieved, relief coming in from one to two weeks. The observations on this point of Wright, who had a large experience with osmic acid injections, correspond to mine.

4 There is very little doubt that the stretching of the nerve trunk, necessarily incident to the injection, is productive of good, supplementing, as it must, the action of the acid. There is, therefore, no good reason why the stretching should be avoided intentionally, except perhaps for experimentation.

5 In the case of small nerves, it will be found exceedingly difficult to inject directly into the nerve trunk, that is, the needle eye will pass to the distal side of the thread-like nerve, or perhaps not enter the nerve substance at all. Or, notwithstanding the utmost care, the fibers may be so teased apart by the needle point that the fluid will simply be spilt about the nerve. In such a case, in order to bring the acid in contact with all of the fibers, it is wise to clip the nerve so that the end may be bathed in the fluid.

6 The effect of manipulation of the nerve, as by stretching, has not as yet been eliminated as a possible aid to the chemical action of the osmic acid, therefore, a general anesthetic should be administered so that neurectomy or section of the nerve may be done if desired.

7 My experiments have shown no changes in the nerve tissues as the result of injections of osmic acid other than the disintegration of fat and oil globules in the perineurial space and in the white matter of Schwann, such white matter of Schwann being simply fatty matter in a fluid state insulating and protecting the essential part of the nerve. The degenerations appearing in the nerve itself are only such as may be fairly attributed to nutritional changes and exposure, the indirect result of the selective action of osmic acid of destroying fat. There is no reason why this fat should not be restored and the nerve again become capable of transmitting sensation, that is, theoretically, the neuralgia may return after injections of osmic acid.

8 Osmic-acid injections are uncertain in effect as to the cure or relief of neuralgia.

9 A large percentage of cases of neuralgia will be relieved for months by osmic-acid injections.

10 The injection of osmic acid for the relief of tic douloureux is justifiable, even if it should become necessary to repeat the injections at intervals of a few months, particularly in view of the unfavorable results of the so-called radical operations.

11 The local irritation produced by the acid and the remote toxic and irritant effects are not serious in their consequences and have no meaning as to the effect of the osmic acid in relieving neuralgia.

12 The solution of osmic acid should be made fresh for each operation as deterioration is rapid.

13 Pain persisting several days in a small circumscribed area means that the filaments supplying this area have not been acted on by the acid. The acid usually finally destroys such filaments. It may become necessary, however, to reopen a wound for the purpose of injecting such filaments.

14 Mere subcutaneous injections are of little or no value.

Value of Society Meetings—The art of medicine is important, but in these days of scientific accuracy in diagnosis, the microscope and test tube and x ray, can not be ignored even by the busiest of men, as by their careful use mistakes are prevented and injustice to our chantage avoided. It is in journals and books and medical societies that knowledge and familiarity with what is now in medicine must be learned, and wise is the doctor who early discerns that a membership in an active medical association is one of the best means of keeping in touch with the best, both of science and of men, that is worth knowing in his profession.—A W Hurd, in *Buffalo Medical Journal*.

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SOME STUDIES IN METABOLISM OF CANCER PATIENTS AS COMPARED WITH NORMAL INDIVIDUALS

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In this paper it is proposed to review and summarize previous work on nitrogen and chlorin metabolism, and then to give in detail experiments carried out, at the suggestion and under the direction of Dr. Clowes, on a normal individual and on several cancer patients, and to compare the results of such experiments.

SUMMARY OF THE PREVIOUS WORK

Much of the previous work loses in value because of the lack of accurate data recording quantities of nitrogenous food and chlorids ingested, quantity of nitrogen and chlorids excreted through the feces, body weight, etc. One very important source of error in the determination of chlorids is the change from solid to liquid food, especially the substitution of a milk diet for the normal solid food. The ratio of chlorids to proteid matter in milk is smaller than in solid food as usually consumed, hence, with milk one expects a reduced chlorid ingestion and reduced chlorid excretion.

The literature for the last twenty-five years shows divergent views on the equilibrium of nitrogenous bodies and chlorids in cases of impaired metabolism. Vogel,¹ Rommelaire,² Jacoby³ and others noted marked disturbances in excretion of urea and chlorids in cachectic cancer patients, but did not carry out exact experiments to determine the amount of food stuff consumed as compared with the waste products excreted. Müller⁴ and Klemperer⁵ concluded that, under the influence of the toxic excretions from tumors, the amount of nitrogen excreted was in excess of the amount ingested, while Moraczewski finds the converse to be true. Similar differences of opinion exist as to the retention and excretion of chlorids.

A paper⁶ published by Jacoby in 1887 is one of the first records of work of real value. He compared the daily nitrogen excretion of a normal individual with that of a patient suffering from carcinoma of the liver, and found that, while the normal individual gained weight with a nitrogen excretion of less than 12 gms daily, the cancer patient lost weight with an excretion of 18 gms daily. The next work of value was done by Müller,⁶ who studied the conditions of metabolism in 9 cancer patients. He concluded that there was a continued loss of nitrogen from the system in spite of the rapid growth of the tumor, that the loss of body weight corresponded to the loss of nitrogen when the influence of edematous fluids was considered, and that where nutritive processes were seriously affected by the tumor the ratio of the nitrogen in the excreta to the nitrogen in the food was similar to that in starving individuals.

G. Klemperer⁵ concludes, from a series of fairly exact metabolic experiments, that when cancer and normal individuals are subject to the same experimental conditions

the former will lose and the latter may gain in body proteid.

Laudenheimer⁷ took five cancer patients and found that two maintained equilibrium of chlorids, while in two the chlorids excreted were below the amount ingested, he concluded that this was the result of nephritic or circulatory retention of water and salt.

Schopp⁸ says that, while both chlorid and nitrogen excretion frequently fall below the amount assimilated in cancer patients, the difference may be attributed to ulceration of the tumor, the secretion containing considerable quantities of chlorid.

Böhne⁹ found in a marked cachectic cancer patient a daily retention of 3 to 4 gms of chlorid for a period of four weeks, and further claims that a chemical analysis revealed four times the amount of chlorid normally found in the liver.

Braunstein¹⁰ carried out a series of analyses of urine in ten cancer patients, in five of which an exact record had been kept of the chlorid and nitrogen content of the diet. In three of the five patients a loss of nitrogen was observed, being particularly marked in a patient suffering from cancer of the esophagus, where the loss reached as much as 10.6 grams per day for a period of four days. He failed to find any marked difference between the chlorid contained in the food and in the excreta.

A review of this literature will impress one with the great variations in the results obtained. Some have observed a gain in nitrogen on the part of the system, which they attribute to the rapid growth of the tumor, others have noted a distinct loss of nitrogen, which they have supposed was due to the action of toxic substances produced in and excreted from the tumor. In any case, the discrepancies observed would justify further investigation in this direction.

While a diminished excretion of chlorids has frequently been observed in cancer patients, few of the early writers noted the fact that in many of the experiments, milk having been substituted for solid food which could not be assimilated, the chlorid ingestion was necessarily reduced. Therefore, it would be a wrong deduction to say that chlorids were retained.

A complete review of the literature bearing on this subject may be found in the Fifth Annual Report of the New York State Cancer Laboratory.

OBJECTS OF THIS STUDY

The main objects of our investigations have been as follows:

1 To determine whether the gain or loss in weight of a cancer patient was associated with a corresponding gain or loss of nitrogen from the system and to compare these results with those obtained from the study of a normal individual.

2 To determine whether chlorid is retained in the system, by comparing the amount assimilated with the amount excreted, and, if so retained, to what extent.

3 To determine whether the chlorid retained in the system has any direct relationship with the supposed increase of chlorid in the blood and with the formation of edematous deposits.

4 To study the effect of adding or totally excluding chlorid from the diet as compared with the effect of such treatment on a normal individual.

1 Vogel. *Zeitschr. f. ration. Med.* vol. iv, 1854, p. 362.

2 Rommelaire. *Journ. de Med. de Chir. et de Pharm. de Bruxelles*, 1883, 1886.

3 Jacoby. *Stoffwechsel bei Icterus*. Dissert. Würzburg, 1887.

4 Müller. *Alb. and Paul Saxl. Centralblatt f. Phys.* 1903, vol. xviii, p. 497.

5 Klemperer. *Verhandl. d. physiol. Gesellsch. zu Berlin* 1889, Verhandl. d. 8. Congresses f. innere Med., 1889. *Zeitschr. f. klin. Med.*, vol. xvi, 1889. *Berl. klin. Wochenschr.*, 1889, No. 40. *Charité Annalen*, vol. xvi, 1891.

6 Müller. *Fr. Zeitschr. f. klin. Med.* vol. xvi, p. 496.

7 Laudenhimer. *Zeitschr. f. klin. Med.*, vol. xxi, 1892, p. 513.

8 Schöpp. *Deutsch. med. Wochenschr.* 1893, No. 46.

9 Böhne. *Fortschritte d. Med.* 1897, No. 4.

10 Braunstein. *Revue de Med.* vol. vii, 1891, Nos. 7 and 10.

METABOLISM EXPERIMENTS

Case 1 Normal Individual—In order to note the influence of varying quantities of chlorid on normal metabolism, it was determined to carry out a series of experiments on one of ourselves. For two periods of thirteen and nine days, respectively, experiments in feeding were carried out on Dr G, physician, age 32, weight 66 kilo, health normal. During this time an accurate record was kept of all food and liquid consumed and of all feces and urine passed and samples of food, liquid, feces and urine taken to the Gratwick Laboratory for accurate chemical analysis. Data were kept of daily weight and exercise. The first five days were devoted to determining the nitrogen equilibrium. It was found that body weight remained constant when the food ingested during twenty-four hours contained from 13 to 11 grams of nitrogen.

For the remainder of the period the amount of nitrogen was varied in quantity, this change, however, affected the body weight far less than the change in the quantity of chlorid. When the nitrogenous food was largely increased in quantity, a portion of the excess was passed by the bowel and the kidneys the remainder being apparently retained by the system.

TABLE I
First Period

Date	N in Food	N in Ur and fec	NaCl in Food	NaCl in Ur and feces	Body weight in kgs	Uric Acid	Ammonia
Jan 24	11.0	14.1			65.9		
Jan 25	15.7	15.0			65.1	58	
Jan 26	12.4	13.5	7.9	8.1	65.4	73	87
Jan 27	15.5	13.7	8.1	7.9	66.1	34	80
Jan 28	13.9	15.9	27.6	20.0	66.4	74	63
Jan 29	12.9	14.2	23.0	23.6	66.5	51	51
Jan 30	17.6	14.6	12.1	17.6	66.1	46	76
Feb 1	13.0	13.1	2.0	0.5	65.1	33	78
Feb 2	9.1	11.3	1.3	3.8	64.3	36	60
Feb 3	5.1	9.2	0.3	5.4	63.7	46	56
Second Period							
Mar 30	12.2	10.7			66.7	48	
Mar 31	15.4	17.6	32.2	26.5	66.7	67	91
Apr 1	12.8	13.2	30.3	27.8	67.5	52	83
Apr 2	14.0	14.1	7.8	12.8	67.0	43	97
Apr 3	11.4	13.9	6.5	9.7	66.7	46	76
Apr 4	11.6	13.9	4.1	6.8	66.4	47	84
Apr 5	12.1	12.8	6.6	6.3	65.8	38	69
Apr 6	8.2	11.3	13.7	10.6	65.7	43	82
Apr 7	6.6	11.1	3.8	7.6	66.0	35	57

During the last two days of the first period the proteid food was reduced to a considerable extent, the results of which follow.

When the nitrogen ingested was reduced from 13.5 to 9.0 gms, the nitrogen excreted fell from 13.5 to 11.3 gms, whereas a further reduction to 5.1 gms ingested led to an excretion of 9.3 gms. These figures show that a proportionate loss of nitrogen by the body follows a reduction of nitrogen in the food, but that the actual reduction in the excreta is only about one-half the actual reduction in the food.

During the second period constant body weight was maintained with an average daily consumption of 13.6 gms nitrogen. A study of the last two days of this period, during which the patient was once more subject to partial starvation, shows that about the same ratio exists between the intake, output and loss of nitrogen, as in the previous starvation period. In other words, it became apparent that when the nitrogen of the food is rapidly reduced to a point below the normal, the loss on the part of the body required to compensate for this difference is not equal to the amount in question, but only to about one-half.

It was not deemed advisable to carry the reduction of nitrogen in the food beyond this point. The figures obtained indicate that the amount of nitrogen lost daily in a state of absolute starvation would be about 6 gms, or 1 gm per kilo.

The study of the influence of varying quantities of sodium chlorid on elimination and body weight is very interesting. Under normal conditions the amount of sodium chlorid consumed lay between 7.5 and 8 gms per day. When the ingestion of NaCl was increased from 8 to 27.6 gms the total excretion was 20 gms, showing a gain of 7.6 gms by the body. The following day the consumption of 22.9 gms NaCl was followed by the excretion of 23.6 gms, a practical balance being established on this day. The next day, when 12 gms only were consumed, a total of 17.6 gms was eliminated, showing the tendency of the body to recover chlorid equilibrium, but the following day, when only 2 gms were ingested and 9.5 gms excreted, the body suffered a decided loss in chlorid, which was continued on the next day, when only 1.3 gms being ingested 3.78 gms were excreted. The following day ended the experiment with an ingestion of 9.2 gms and a loss of 5.3 gms, showing a tendency of the system to replace chlorid previously lost. The results of chlorid experiments in the second period were very similar to those just mentioned.

The effect of large daily consumption of chlorid on the excretion of nitrogen is marked, the maximum excretion of nitrogen occurring at the same time as the maximum excretion of chlorid.

The curve representing body weight follows almost exactly the curve showing consumption of chlorid. The total loss of weight between the maximum and the minimum points, about 2 kilos, was accompanied by a loss of chlorid amounting to about 15 gms, which would fully account for that difference in weight, assuming that a .75 to .8 per cent sodium chlorid solution is isotonic with the serum. The second period showed an even more exact ratio between chlorid ingested and body weight.

The loss of nitrogen during this period had an insignificant effect on the body weight as compared with the variation in chlorids.

The volume of water ingested shows a preponderance over that excreted by the kidneys of from 500 to 600 cc. During the time when the greatest quantity of chlorid was ingested the intake of water was about two liters, while the urine passed was 1,300 cc, the specific gravity never rising above 1023 to 1022. Only when the chlorid in the diet was reduced to a minimum did the urine excreted equal the water ingested.

We, therefore, see that the variations in body weight follow closely the variations in amount of chlorid ingested and excreted, the amount of water held in the system being directly affected by the amount of chlorid retained. A period of not longer than forty-eight hours is required to establish chlorid equilibrium, which is more readily effected than in pathologic cases.

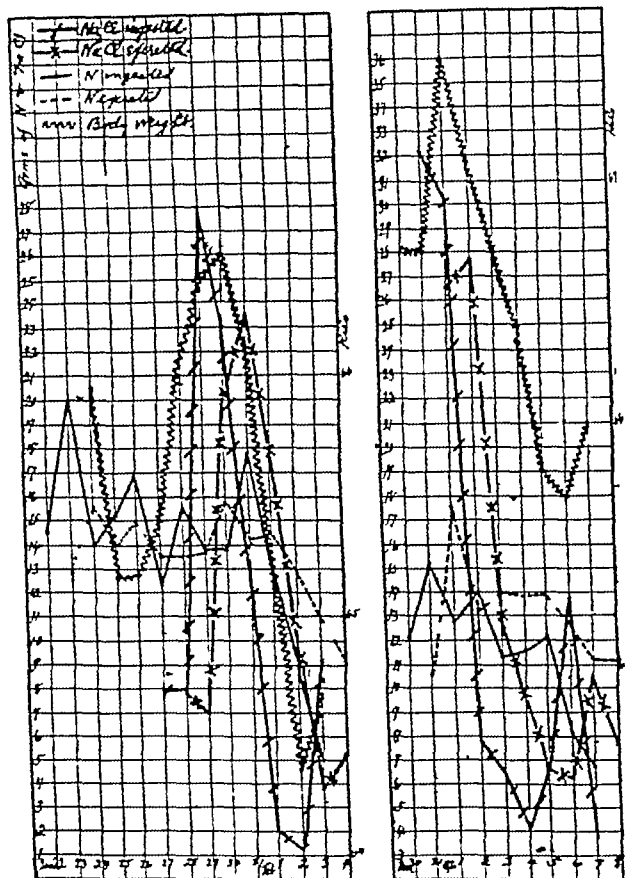
Effect of variations in the amount of chlorid on other constituents of the urine. When the quantity of chlorid ingested was very high, there was a large volume of urine passed, a slight rise in nitrogen excretion, an increase in the phosphates, and a very large excess of uric acid, with a slight decrease in the ammonia. This excess of uric-acid excretion might be due to an increased destruction of nuclei of cells or a more complete removal of uric acid already existing in the blood. This latter theory is in accord with the results published by Dr Clowes relating to the freezing point of urine, which indicate a probable relationship between the excretion of small ions and of large complexes, such as uric acid.

Case 2 Carcinoma of Pylorus—J W, age 75, weight 51 kilos. He experienced difficulty in taking food for months past, he became emaciated and cachectic. When

inspected and palpated a prominent tumor was revealed in the epigastrium. Autopsy showed carcinoma of pylorus.

Examinations were made of twenty-four-hour samples of urine and feces for a period of twelve weeks, for the last eight weeks preceding death estimation was made of total nitrogen and chlorid in the food in order to obtain a comparison of nitrogen and chlorid in food and excreta and to determine the influence of varying proportions of NaCl in the diet.

A glance at Table 2 shows that equilibrium in nitrogen and chlorid was maintained during the first two weeks, the body weight remaining constant. Then began a loss in nitrogen with a retention of chlorid, amounting during the last two weeks of life to 33.7 gms of nitrogen lost and 22.8 gms of NaCl retained, or 80 per cent. of



NaCl ingested was retained. During one week the ingestion of NaCl was increased to 17.9 gms in the hope of eliminating chlorid, the products of metabolism and suboxidized products. The only result was increased edema on the part of the patient. A portion of the chlorid was undoubtedly retained in the system in the increased fluid of the body, but, unlike the normal individual cited, the kidneys did not pass off the excess of chlorid in from twenty-four to forty-eight hours. Possibly the retention of chlorid was due to new chlorid compounds formed by the suboxidized nitrogenous bodies.

TABLE 2.

Date	N in Food	N in U and F	Loss or Gain of N	Cl in Food	Cl in U and F	Loss or Gain of Cl
Feb 4-11	45.0	49.0	+4.0	11.8	11.7	+ 1
Feb 11-18	46.4	42.4	+4.0	14.2	13.3	+ 9
Feb 18-26	36.5	50.6	-14.1	13.0	10.2	+ 2.8
Feb 26-Mar 5	32.0	40.2	-7.3	8.8	4.7	+ 4.1
March 5-12	47.0	50.4	-4.5	12.2	4.0	+ 8.2
March 1-19	38.1	56.0	-17.9	13.2	6.0	+ 7.2
March 19-26	20.0	40.0	-20.0	17.8	2.0	+15.8
March 26-Apr 2	21.0	44.4	-22.8	8.5	1.5	+ 7.0

The patient received an average of 1.66 gms NaCl per day, and he was unable to maintain equilibrium even with this very low ingestion. During the week when NaCl was increased to 17.8 gms, 15.8 gms were retained in the system, the body weight going up to 125 kilos in spite of the loss of nitrogen, which was less marked than during other periods, probably due to retention of nitrogenous products in the edematous fluids.

This case, in which the N equilibrium of a patient weighing originally 51 kilos was maintained for a space of 14 days at 6.5 gms. and in which for the entire period of eight weeks, during which accurate observations were made, the average N excretion was only 6%, affords further evidence in support of the work recently published by Professor Chittenden showing the possibility of maintaining a N equilibrium on a low amount of N for many months in a series of normal individuals.

When the interference with the nutrition caused by toxic or other influences resulting from the tumor are considered, it is remarkable that the loss of N suffered by the body should be as low as is frequently found to be the case in these and other similar series of experiments.

Case 3. Carcinoma of Esophagus and Liver—Mr. U, aged 60, weight 75 kilos. The diagnosis was made during life and confirmed at autopsy by finding three inches of esophagus above the diaphragm a cancerous mass with metastasis to stomach and liver. The patient was fed through a fistulous opening.

For a period of six days exact analyses were carried out on the food to determine the nitrogen and chlorid equilibrium and the effect of increased and diminished feeding of NaCl.

TABLE 3.

Date	N in food	N in U & F	Cl of food as NaCl	Cl of U & F as NaCl	Ur acid
Oct. 20-21	9.58	8.11	.98	3.88	46
Oct. 21-22	9.02	9.20	1.73	3.25	45
Oct. 22-23	9.04	7.03	1.88	1.49	35
Oct. 24-25	9.74	9.28	8.20	3.43	38
Oct. 25-26	9.78	8.50	9.89	7.96	70
Oct. 26-27	9.43	8.10	9.95	6.70	52

A study of the accompanying table shows an average retention in the system of 1 gram of nitrogen daily, which may be explained by improvement in bodily nutritive processes or by the retention of nitrogen in the edematous fluids. Here, however, the retention was the same for both periods, while chlorid and water were retained only during the latter period.

During the first three-day period, when the consumption of chlorid was very low, the excretion of urine was high, averaging two liters per day, but when the chlorid consumption was increased the total volume of urine excreted was less than four liters, showing a retention of fluids and the production of edema. An estimation of the total chlorid ingested and excreted shows a tendency on the part of the system to retain a small portion of chlorid.

This patient, in the absence of marked toxic symptoms, showed practical equilibrium of nitrogen with a slight retention of chlorid.

Case 4. Carcinoma of Right Kidney—Mr. T, aged 66. Autopsy revealed primary carcinoma of right kidney with secondary tumors in liver.

TABLE 4.

Date	N in food	N in excr	Cl in food as NaCl	Cl in excr as NaCl
8-9	5.1	8.3	2.0	32
9-10	5.1	8.6	2.0	32
10-11	5.1	10.5	2.0	62
11-12	2.6	3.9	1.0	08
12-13	5.1	5.4	2.0	33
13-14	5.1	6.3	3.6	55
14-15	5.1	6.8	3.6	82
15-16	5.1	7.1	2.0	45
16-17	2.6	4.5	1.0	10
Total	40.0	61.4	10.2	350

valgum and pes equino-varus of the same leg, together with absence of the patella, severe genu valgum and pes equino-varus of the other limb. The legs in these two cases lay parallel and adjoining and directed toward the left so that they formed an angle with the trunk of 135 degrees. The left or normal hip was abducted and the right or deformed hip was adducted. He states "When one has seen this well-nourished and active child taking this position repeatedly, then one cannot doubt the fact that both the legs had been constrained and had grown in this position *in utero* for a long period."

The next report on this subject is by Zehnder,² who reports a double case in which the birth was normal and in which the child walked at the age of one year, but waddled at the very start. There were no other defects or deformities described. The same year Kirmisson,³ writing on this subject reported the case of a child nine years old with rachitic deformities. The femoral diaphyses had enormous curves convex anteriorly and exteriorly. These curves were continued into the neck of the bone producing coxa vara. He also reports two autopsies on rachitic infants shortly after birth in which the deformities were the same as in his first case.

The next report is by Monchét and Aubion.⁴ They report two cases. The first case was double, with unimportant history and no rickets. Both legs had a total concave bend inward. The second case was single, also without rickets. The authors further call attention to a radiograph of a hip of a child which they believe to have been an intrauterine fracture of the neck, founding their belief on the radiograph. This lesion resembled the first two cases and suggested such a fracture as being possible especially as postluteine fracture could be eliminated in both.

The next report is by Joachimstahl,⁵ who believes that in two cases which he reports he had a type of coxa vara which has clinical relationship with those occurring in the earliest period of extrauterine life but he calls attention to a less typical form of congenital coxa vara which has a relation to congenital defect of the femur. He reports a case in which a severe coxa vara occurred on the right side, with a defect of the upper part of the shaft, and an extreme coxa vara on the left. The author calls attention to a case which Drehmann reported, and reports one which is parallel, the two cases showing similar combinations. He calls attention to the fact that besides the defect in the femur and the bend at the upper end of the stump, there occurred a decided retardation of the ossification of the upper part.

Parallel with Joachimstahl's report we find the report of Reiner⁶ on the relationship between congenital coxa vara and congenital femur defects. He believes that congenital coxa vara is a preceding stage in a deformation process leading to the defect of the femur. He says that there are three types of this condition, each of which represents a different stage in the same process. In the first type, or the first stage we have congenital coxa vara. At the same time the shaft is shortened both in length and caliber. The other two stages are represented by greater defects in the femur, even by total absence, but he emphasizes the fact that each one of the three types is a fixed stage of one and the same deformation process.

The process is referred to as a "modellirendes trauma" beginning in the amnion. What influences the forma-

tion of the deformity is the peculiar course of development through which the femoral shaft passes in its earliest period of embryonic life. At about the tenth week the proximal end of the femur is subject to a transformation process in which the thigh, which is normally abducted in relation to the pelvis, instead of this is now adducted and turned inward, while at the same time the formation of the angle of the neck of the shaft takes place.

Recently Clark⁷ reported a case of congenital coxa vara with associated deformities in a girl two years old, in which the Roentgen picture showed on the left side a typical coxa vara. The other deformities were a bend at the left knee joint of 45 degrees, with absence of the patella and the quadriceps. The foot was in a position of talipes equino-varus. On the right side there was genu recurvatum and talipes calcaneo-valgus. Besides this the radiograph showed the sacrum deflected to the deformed left side and that the upper side of the os innominatum was flattened.

Before concluding this review it is necessary to refer to the conditions described by Drehmann⁸ with reference to joint inflammation in sucklings and their etiologic relation to later deformities. He says that in the earliest age we may have a typical joint inflammation, beginning with local signs, followed by healing and later by deformity. He points out the relation of this condition to an infection such as the gonococcus, but not necessarily this organism. He says that a slight trauma during delivery would predispose toward auto-infection. Among these cases he says there are some so-called congenital dislocations and rarely a coxa vara. He reports two of the latter, one of them typical. The point is that such deformity, according to the author, can not be distinguished from the so-called congenital ones.

DISCUSSION OF CASE

This review, we believe, covers all the important works on congenital coxa vara up to date. The relation of my case to those reported is of some interest. With regard to Drehmann's deformities at the suckling age, I do not believe that mine comes under that category, for there was no history of ophthalmia and no local signs pointing to inflammation.

The rachitic deformities in a few of the cases have nothing to do with mine, as there were no signs of rickets. The question of associated deformities or defects which occurred in so many is an interesting one, because the only other deformity in my case was that of a knock-knee. According to Reiner's belief that coxa vara is one stage in a process leading to femur defects, this case would readily find its place in his classification were it not for his observation that the shaft is shortened both in length and caliber even in the first stage. My case does not answer to this description.

As to the theoretical origin of the deformity *in utero*, we believe that the mechanical conditions are sufficient to explain that. Reiner's theory that at the end of the tenth week the angle of the neck of the shaft is determined by intrauterine conditions seems reasonable as an explanation which is founded on the fact that the femur, instead of being abducted, is adducted. In this connection it seems worth while to place a fetus in the position which my case seemed to have had at birth.⁹

² Zehnder. *Centralblatt f. Chir.*, 1897, No. 9.

³ Kirmisson. *Revue d'Orthopédie*, 1897.

⁴ Monchét et Aubion. *Gazette hebdomadaire de médecine et de chirurgie*, 1899.

⁵ Joachimstahl. *Zeitschrift f. Orth. Chir.*, vol. xii Nos. 1 and 2.

⁶ Reiner. *Zeitschrift f. Orth. Chir.* vol. xii Nos. 1 and 2.

⁷ T. Jackson Clark. *British Journal of Children's Diseases*, June, 1904.

⁸ Drehmann. *Zeitschrift f. Orth. Chir.*, vol. xiii, Nos. 2 and 3.

⁹ vol. xiv, Nos. 3 and 4.

⁹ For suggestion on this point I am indebted to Dr. O. T. Ward.

Taking an eight months' fetus, hardened in formalin, we placed the right leg in its normal position as it occurred at birth, that is, flexed and abducted and then forcibly adducted the left leg on the belly so as to adjoin the other one. Tying the thighs in this position, we took a Roentgen picture of the fetus (Fig 2). The pic-

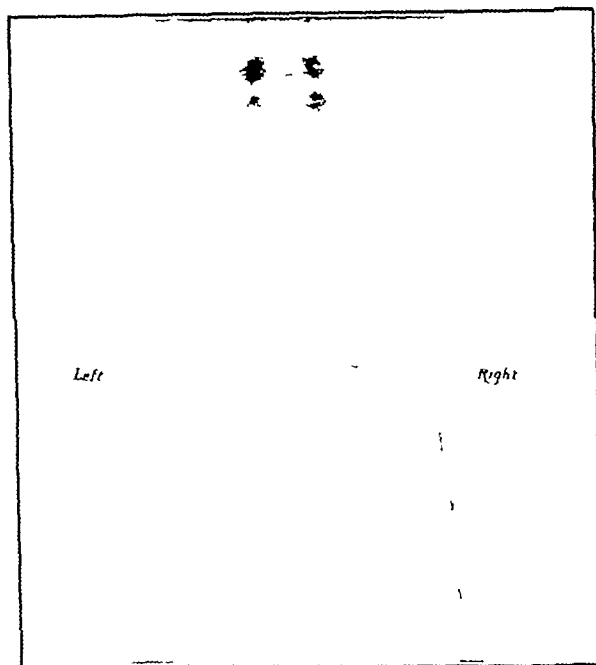


Figure 1

ture shows a different relationship of the proximal ends of the femur to the acetabulum on the two sides. On the right, or normal side, the proximal end lies in a horizontal plane with the lower extremity of the pelvis. On the left, or adducted side, we find the end of the shaft well above the acetabulum in height. Besides this

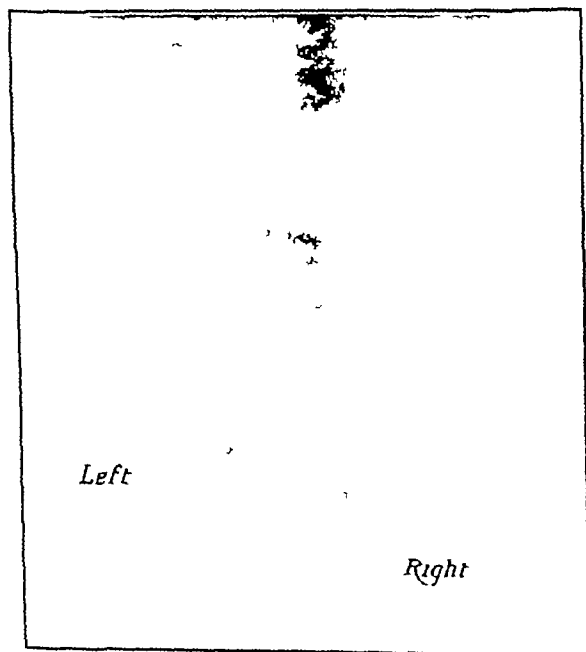


Figure 2

the pelvis is tilted upward on the left and the sacrum deviated toward the same side. This deviation of the sacrum toward the deformed hip is an important point, for

an exactly similar deviation is shown in Clark's radiograph. This means that we have probably demonstrated correctly the mechanical nature of the intrauterine strain.

If my case took the position of this fetus in the uterus we have a right to assume that the relationship must have become fixed and maintained for a long period, but without interfering with the freedom of motion of the joint. Then, after birth, the joints' ends must still further have maintained their relation to the pelvis, the left end remaining higher than the right, even after both legs have been brought downward into their extrauterine positions. This hypothesis is favored by the fact that ossification in the neck takes place from the shaft and travels upward toward the head which ossifies in the acetabulum from a separate center during the first year.

An interesting feature in my case is a diminution in size of the epiphysis of the head. On Clark's radiograph an epiphysis is not recognizable. The explanation of this is either the faulty static conditions of weight bearing, or retarded growth, due to a lesion of the neck. The shortening of the neck, together with thickening, suggests an intrauterine fracture, but we are not able to conceive a fracture in the true sense where the bone has not yet been formed.

CONCLUSIONS

Congenital *coxa vara* is usually associated with defects or deformities of other parts, commonly with the defect of the femur and with deformities of the lower limbs. It may be intrauterine in its strictest sense, it may be the result of an intrauterine infection, or it may be combined with congenital rachitic deformities. At least some of the strictly intrauterine cases are associated with peculiar positions of the thighs in utero, that is, adduction of the thigh in question. This peculiar position of the joint might explain a fixed deformity in the later developing hip joint, if we may assume that the proximal end retains its relative position to the acetabulum after birth.

MORPHOLOGIC AND HISTOGENETIC CHARACTERISTICS OF ENDOTHELIAL TUMORS

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A careful examination of the literature, not only of the past, but also the present, has convinced me that many of the tumors reported as carcinomata and sarcomata as well as tumors such as Krompecher's "carcinoma endotheliale" or Hansemann's "adenoma endotheliale," are in reality pure endothelial tumors. The latter author even speaks of a "carcinoma sarcomatodes endotheliale," thus combining three distinct groups of tumors in one. Krompecher¹ speaks of a "carcinoma endotheliale sarcomatodes," and calls an endothelioma a carcinoma with undifferentiated epithelium, naming it a "carcinoma endotheliale." It can only be an endothelioma which is capable of producing polymorphous structures leading to such complications of names.

The variability in the arrangement of endothelial cells and the ability of these cells to undergo metamorphosis, simulating the epithelial type at one place and the connective tissue type at another, has given rise to great confusion in the diagnosis of tumors. Morphologically, an endothelioma may resemble typical (adenoma)

or atypical (carcinoma) organoid structures or typical (fibroma) or atypical (sarcoma) histoid growths

It is extremely confusing for the student who has learned to diagnose common atypical histoid growths, as sarcomata and atypical organoid tumors as carcinomata or endotheliomata, to read of the diagnosis of an atypical organoid tumor by Billroth as alveolar sarcoma, by Rindfleisch as sarcoma endotheliale, by Waldeyer and Kolaczek as angiosarcoma, by Fischer and Cramer as endothelial sarcoma because atypical organoid tumors

their morphology (atypical organoid tumors are cancers) But according to their histogenesis, they are not cancers at all The greatest confusion has thus been brought about in the nomenclature of a class of tumors, which could neither from a histogenetic point of view nor from a purely morphologic one be classified either with the epithelial or with the connective tissue tumors Endothelial tumors simulate morphologically the

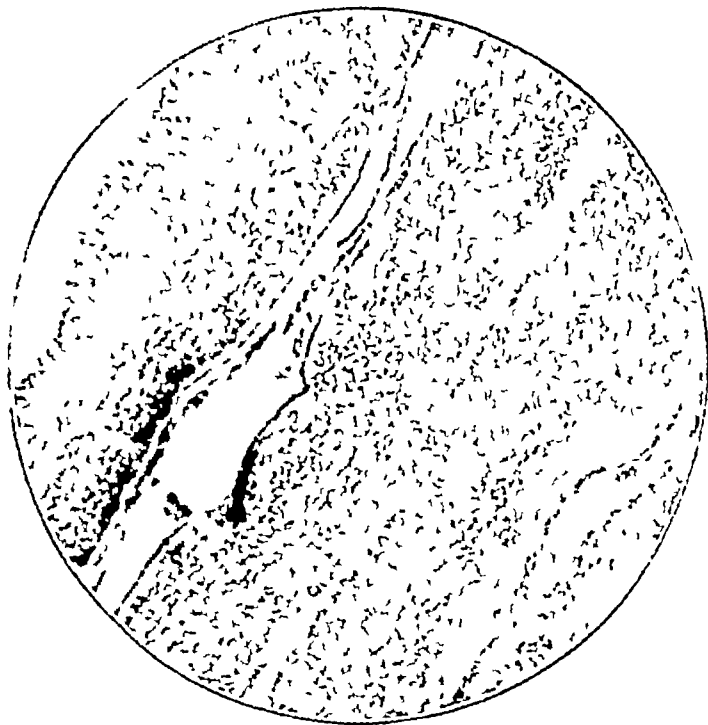


Fig. 1—Lymphangioendothelioma intravascular of knee joint



Fig. 3—Lymphangioendothelioma intravascular of uterus fibrous tissue stroma with cellular columns and islands of cells containing lumina.

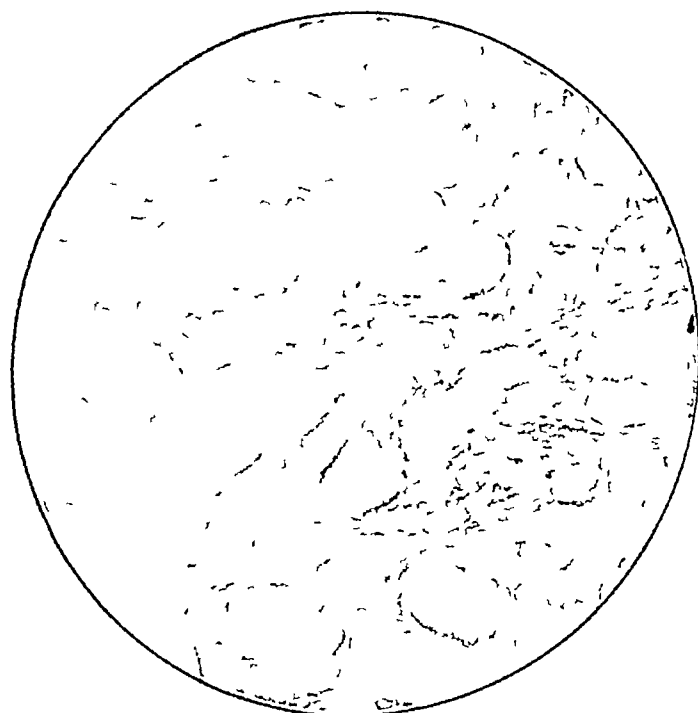


Fig. 2—Lymphangioendothelioma intravascular of uterus Alveolar structure Van Gieson stain

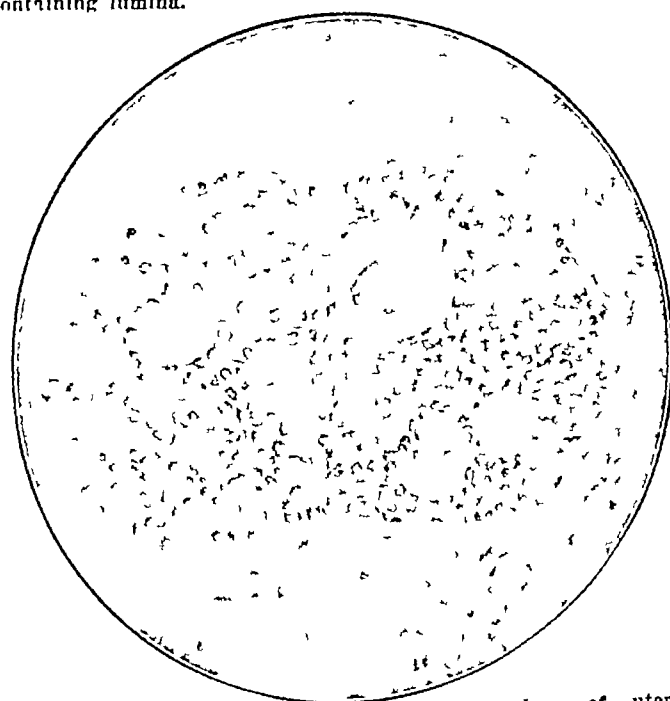


Fig. 4—Lymphangioendothelioma intravascular of uterus Island of endothelial cells showing lumina filled with mucoid material The cells around the lumina are somewhat cylindrical, imitating tubular glands

exclude for him the connective tissue growths Here the tumors are diagnosed by their histogenesis

All these organoid sarcomata are really endotheliomata, and thus by their histogenesis are very closely related to the atypical connective tissue tumors, whereas by their morphology alone they resemble the organoid or epithelial tumors, and are called by Schulz endothelial cancer, by Neumann connective tissue cancer and brain cancer They have been diagnosed according to

atypical epithelial tumors, and histogenetically, the atypical connective tissue growths, but they only simulate them and can not be included with either type Whenever this was done it either upset the whole system of practical diagnosis, or it violated the only scientific classification of tumors, that is, a histogenetic one Unfortunately, we can not always see the earliest steps in the formation and propagation of a tumor in

the living tissue, but must depend on interpreting these processes from histologic examinations. In the endothelial tumors we compare the parenchyma with normal endothelium just as we divide epithelial tumors histogenetically by comparison with normal squamous and cylindrical epithelium into two classes. Here also our diagnosis lacks exactness at times, because we are unable to decide whether we are dealing with squamous

and lymph vessels may form histogenetically heman-gioendothelioma and lymphangioendothelioma, respectively.

Embryologically, these tumors should belong to the connective tissue group, but endothelial cells resemble in many respects epithelial cells, and stand about midway between epithelial and connective tissue cells, which

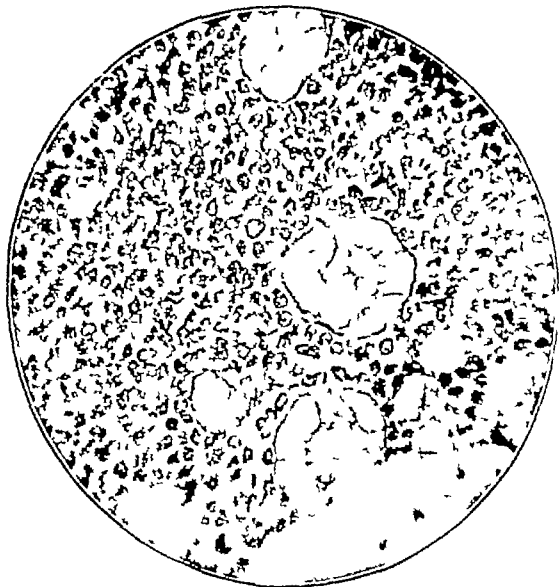


Fig 5—Lymphangioendothelioma intravascular of uterus. Endothelial cell nest with lumina containing a delicate fibrillar net work, which stains red with polychrome methylene blue and is coagulated by acetic acid

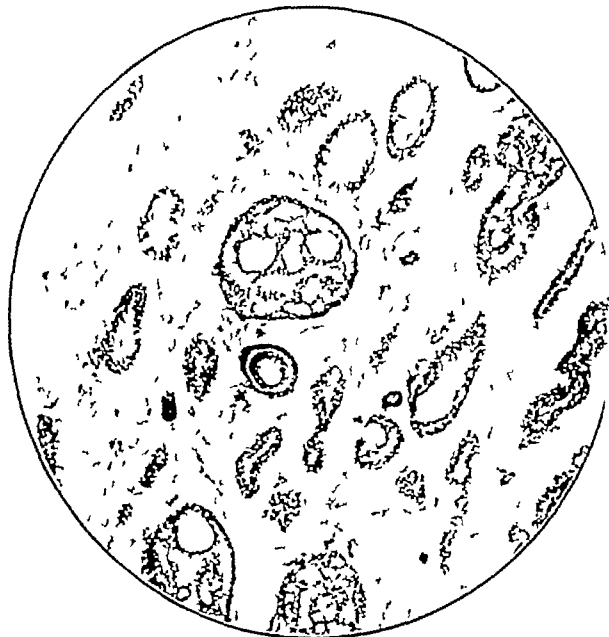


Fig 7—Lymphangioendothelioma intravascular of submaxillary gland



Fig 6—Lymphangioendothelioma intravascular uteri. Structure similar to carcinoma. Large vessel with proliferated intima containing many lumina. The vessel lumen is still visible

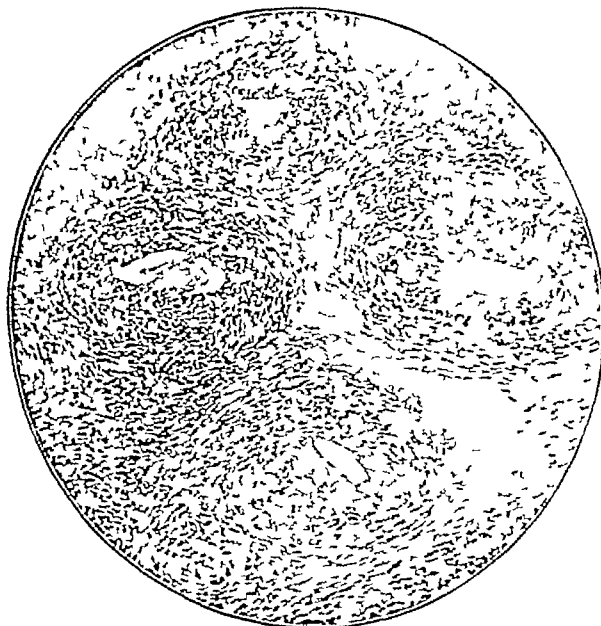


Fig 8—Hemangioendothelioma perivascular of muscle sheath (arm)

or with cylindrical epithelium histogenetically. If we follow the general rule of attaching the end syllable "oma" to the name of the normal tissue which is the nearest related to the tumor tissue, morphologically as well as biologically, a growth which originates thus histogenetically from endothelium should be called endothelioma. Thus the endothelium of blood

accounts for the fact that endotheliomata have been called at one time epithelial growths (carcinomata), and at another time connective tissue growths (sarcomata). Histogenetically, they belong to the connective tissue tumors, because these flat endothelial cells may become

cylindrical form spindle cells and appear as fibroblastic elements

CLINICAL SIGNIFICANCE OF ENDOTHELIOMA DIAGNOSIS

A correct diagnosis of endothelioma is of the greatest practical value to both surgeon and patient, because endothelial tumors differ greatly clinically from other malignant tumors in that they are of slower growth

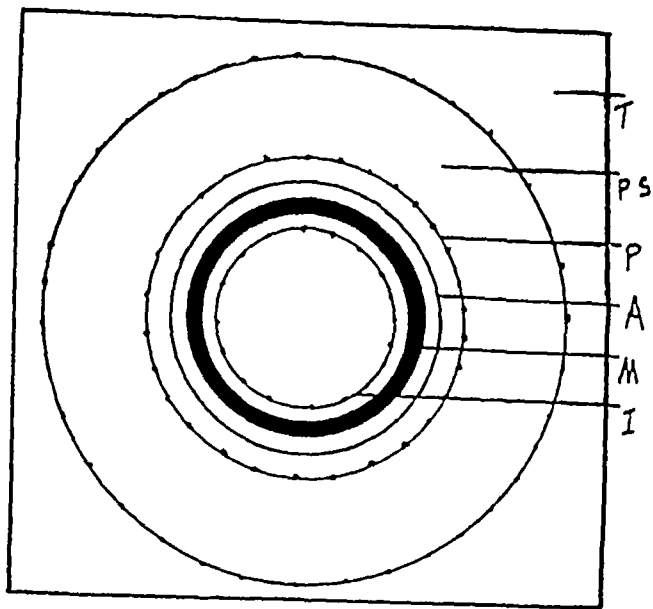


Fig 9 (a) —Diagrammatic representation of perithellum and perivascular lymph space. I Intima of blood vessel. M Media of blood vessel. A Adventitia of blood vessel. P Perithellum. PS Perivascular lymph space. T Tissue.

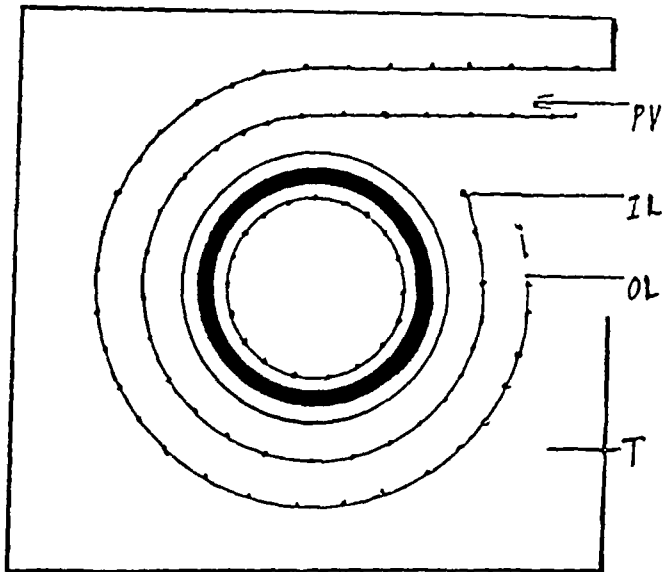


Fig 9 (b) —Diagrammatic representation of inner layer of perivascular lymph vessel which may be mistaken for perithellum. PV Perivascular lymph vessel. IL Inner layer (endothelium) of perivascular lymph vessel which may be mistaken for perithellum. OL Outer layer (endothelium) of perivascular lymph vessel. T Tissue.

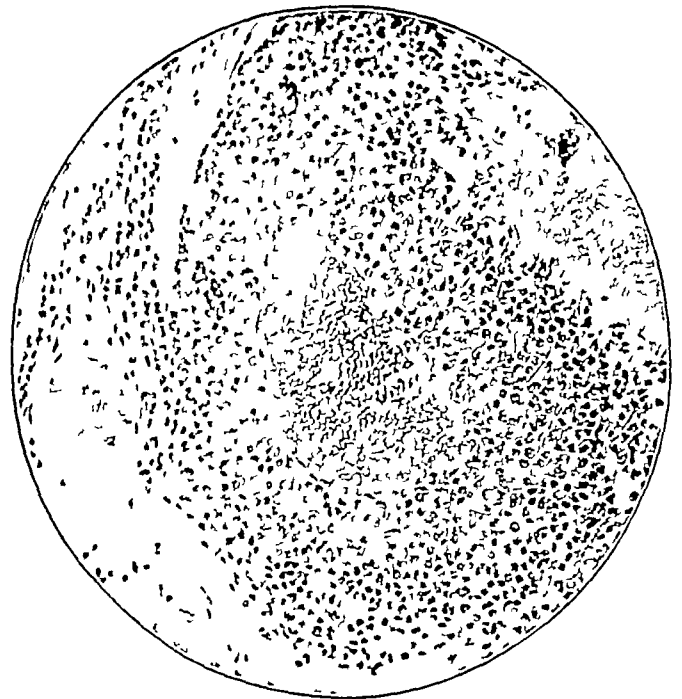


Fig 11 —Hemangioendothelioma perivascular of mammary gland

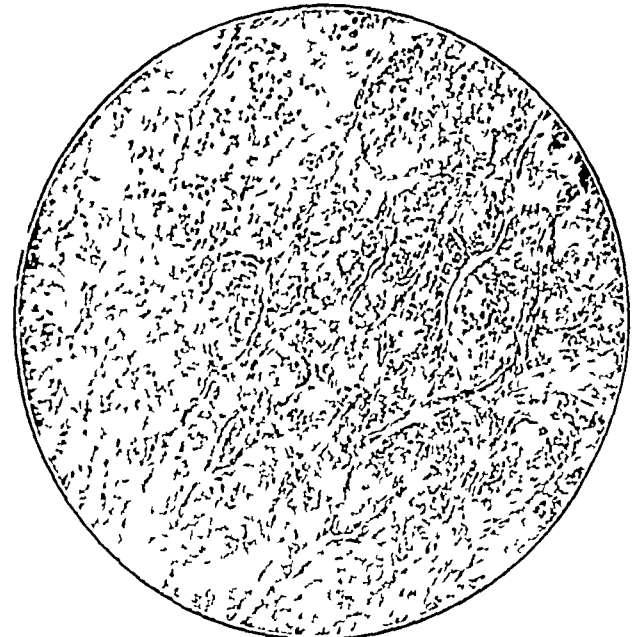


Fig 12 —Hemangioendothelioma perivascular of cervical lymph node



Fig 10 —Hemangioendothelioma perivascular of mammary gland

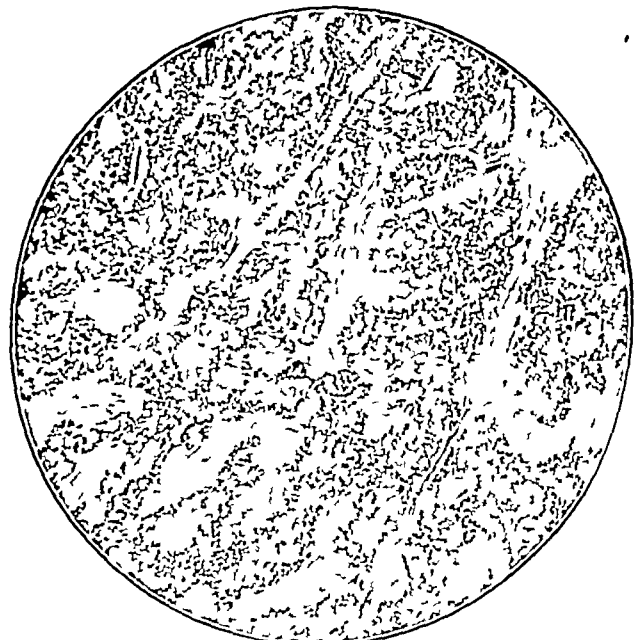


Fig 13 —Cylindroma of parotid gland

and do not produce metastases until late, when the tumor has reached considerable size. The neighboring lymph nodes are not early affected, as is common in carcinoma. The prognosis after thorough removal is much better and a cure much more probable than in carcinoma or sarcoma. Endotheliomata, however, are exceptionally prone to recur at the seat of operation, much more so and much earlier than carcinomata.

NECESSITY FOR A SYSTEM OF DIAGNOSIS

In view of these clinical facts, a system of accurate diagnosis of endothelial tumors becomes of the greatest importance. Endothelial tumors are very commonly mistaken for carcinomata morphologically because these tumors have an atypical organoid structure resembling epithelial neoplasms, whereas, histogenetically, they are of mesoblastic origin, and endothelial tumors are thus included under atypical connective tissue growths although their cells are morphologically very different from connective tissue cells.

The struggle between the purely morphologic and the purely histogenetic classification in the different text-books and the fact that these tumors differ very much in their clinical behavior from carcinomata and sarcomata, demonstrate the necessity of recognizing endothelial tumors as a class by themselves.

I can not at all agree with Hansemann and Ziegler, who propose to solve the problem by including endothelial tumors with epithelial neoplasms because they correspond in their structure and clinical behavior to the epithelial tumors of the ectoderm and entoderm. It is just this difference in clinical behavior, the slow growth, the late metastases and the better prognosis after thorough removal of endotheliomata, which distinguishes these growths from the carcinomata and makes a correct diagnosis so essential.

A practical system of diagnosis would seem to lie in entirely detaching endothelial tumors from the other tumor groups and in the establishment of a separate class of endothelial tumors, without disturbing the usual and useful system of histologic and histogenetic classification in this way:

- 1 Epithelial tumors (organoid), typical (benign), and atypical (malignant)
- 2 Endothelial tumors (organoid)
- 3 Connective tissue tumors (histoid), typical (benign) and atypical (malignant)
- 4 Teratoid tumors

According to whether the endothelial proliferation originates from lymph vessels and lymph spaces or from blood vessels, and whether the inner endothelial lining of the vessels proliferates or the outer, the endothelial tumors may be further classified:

- 1 Lymphangoendothelioma intravasculare.
- 2 Hemangoendothelioma perivasculare
- 3 Hemangoendothelioma intravasculare

When marked hyaline degeneration is present in any of these morphologically distinct types, we may add to the above names "cylindromatosum." Instead of speaking of a perithelioma, we use the term perivasculum. I will discuss the reasons for the various changes later.

For a really scientific foundation, such a system should have not only a morphologic basis, but a biologic and histogenic one as well. Morphologically, endothelial tumors appear like carcinomata, histogenetically, they should be sarcomata. To justify the consideration of endothelial tumors as a separate class and to determine the various types of endothelial tumors which, morphologically, may simulate carcinomas, adenomas and sarcomas it will be necessary to prove

1 That endothelial cells can be considered as a special type of cells, biologically different from epithelial and connective tissue cells.

2 That certain characteristic morphologic distinctions exist between endothelial tumors and those they resemble morphologically (carcinoma) and histogenetically (sarcoma).

3 That such morphologically characteristic endothelial tumors can be traced histogenetically to pre-existing endothelium.

ENDOTHELIAL CELLS BIOLOGICALLY SPECIAL CELLS

Since His invented the word endothelium for the flat cells which constitute the inner lining of the blood and lymph vessels and of serous cavities, and differentiated these cells from epithelial cells, pathologists have spoken of tumors originating from these cells as endothelioma until Stoeckh, Ranvier and other histologists began to classify them as true epithelial cells, because morphologically they resembled squamous epithelial cells, thus neglecting their apparent but embryologically contested mesoblastic origin entirely. The result was that some pathologists considered these tumors as epithelial neoplasms (carcinomata). The more observing noticed that these tumors differed morphologically from squamous cell carcinomata and spoke of endothelial cancers. Embryologically, it is generally conceded that endothelial cells of blood and lymph vessels are developed from the mesoderm, although some embryologists contend that they are formed by the entoderm. The mesoderm also is said by one school of embryologists to originate from the ectoderm and by another school from the entoderm. It is plain, therefore, that the pathologist can not classify endothelial tumors by embryologic data as a basis, either with the epithelial or the connective tissue tumors.

Borst² defines the endothelial cell as a morphologically and functionally well-characterized cell form, a modified connective tissue cell, specially differentiated at the shores of plasmatic streams, and includes under endothelial cells all cells which form one layer of flat cells, lining serous cavities, meningeal lymph spaces, inside and outside layers of blood and lymph vessels and the lymph spaces of connective tissue.

From a biologic point of view, endothelial cells can be readily differentiated from other connective tissue cells by their ability to secrete mucin, hyaline and amyloid material, thus imitating the secretory functions of epithelial cells (Heidenhain³).

On the other hand, endothelial cells are capable of producing connective tissues in the inflammations of serous cavities, blood and lymph vessels, producing granulation tissue, epithelioid cells, giant cells, as well as intercellular cement substance. They may again take on their embryologic columnar cell form and produce adenoma-like tubules lined with one layer of cylindrical cells like epithelium.

These are the reasons for the polymorphous nature of endothelial tumors which may simulate the structure of a carcinoma, an adenoma or various types of sarcomata and which have given rise to the confused diagnostic nomenclature in the literature of tumors. Borst has collected a number of such diagnoses from the literature, which, from the descriptions of the authors are plainly endothelial tumors, as follows:

Robin, epithelioma of serous membranes, Schulz, endothelial cancer, Rindfleisch, sarcoma endotheliale, Fischer and Cramer, endothelial sarcoma, Neumann,

2 Lehre von den Geschwülsten 1902 pp 276 and 292

3 Pflügers Arch vol XLIX, p 209

connective tissue cancer, Ewetzky sarcoma plexiforme, Billroth, alveolar sarcoma, Waldeyer, Kolaczek and Hippel, angiosarcoma, Arndt and Maier, carcinoma cerebri, Schottelius lymphangitis carcinomatosa, Billroth, cylindroma, Burkhardt, perithelioma, Bohme, sarcomacarcinoma, Sattler, carcinoma sarcomatosum; Hansemann, carcinoma sarcomatodes endotheliale, Nauwerck, hyperplastic capillary angioma, Hansemann, adenoma endotheliale Hansemann, carcinoma endotheliale

GENERAL MORPHOLOGIC CHARACTERISTICS OF ENDOTHELIAL TUMORS

Endotheliomas have certain general characteristics which distinguish them from other atypical organoid tumors (carcinomas)

1 The tumor cells in endothelioma are intimately connected with the stroma and can not be brushed out of the stroma as is the case in carcinoma in which the epithelial cells may also retract from the stroma and show spaces

2 Endothelial cells produce intercellular cement substance and are closely packed together, whereas the epithelial cells in carcinoma have no intercellular substance and form no compact layers



Fig. 11—Recurrent hemangioendothelioma perivascular of arm, 4 months growth

3 In endothelioma delicate fibrillar processes extend from the walls of the alveoli into the proliferated endothelial cell masses. These are absent in carcinoma

4 In endothelioma the cell masses consist of a dense mosaic of many layers of cells with small, sharply outlined nuclei, surrounded with a broad envelope of clear, glassy perinuclear protoplasm. Carcinoma cells have large vesicular nuclei, with a moderate amount of perinuclear protoplasm, more or less granular

5 In endothelial tumors the cells are arranged in the form of cellular cords and cylinders (round masses in carcinoma), and may separate out hyaline material (cylindroma) or form lumina-like areas (sieve-like) in the cellular cords, due to secretory processes of endothelial cells

6 To distinguish the endothelial tumors from sarcomata it is to be remembered that the former have an organoid the latter a histoid, structure. According to

this definition every large-cell sarcoma with a well-developed stroma, which was formerly called alveolar sarcoma, would be called an endothelioma

SPECIAL MORPHOLOGIC CHARACTERISTICS OF THE VARIOUS TYPES OF ENDOTHELIAL TUMORS

From a large amount of material collected during the past eight years I have chosen six cases which will illustrate the various points made in this paper and the reasons for the adoption of a nomenclature, which is justified in view of its practical nature as well as its well-formed morphologic and histogenetic basis

Lymphangioendothelioma Intravasculare—Such tumors occur most frequently in the salivary glands, skin, meninges, testicles, ovaries, bones, serous membranes, stomach and mammary glands. This tumor has an organoid structure, consisting of a fibrillar matrix and connective tissue stroma, arranged in rows (Fig 1) or forming an alveolar structure (Fig 2), and more or less solid cords or columns of endothelial cells. These solid cellular columns may be seen, at the circumference of the tumor, to be continuous with branching net-like narrow cellular strips which invade the neighboring connective tissue and produce the appearance of newly forming lymph vessels, and are in reality the youngest forms of the tumor cells, infiltrating and invading the surrounding tissue. The larger, solid and older cellular columns frequently have a sieve-like appearance, due to the formation of so-called lumina (Fig 3). These lumina, although resembling the lumen of capillary lymph vessels within the endothelial cell mass, are produced by a secretory process of endothelial cells. This secretion may collect in larger or smaller amount. It gives the same reactions as mucin (Fig 4). In my specimens the so-called lumina contained a fine fibrillar network which stains blue with alum hematoxylin and pink with polychrome methylene blue (Fig 5). Acetic acid coagulated it. The endothelial cells around these so-called lumina are pressed on and take on cylindrical shapes, so that pictures like tubular glands may be produced (Fig 4).

The endothelial lining of a lymph vessel may proliferate so that its intima consists of many densely packed layers of polygonal cells with small distinct nuclei (Fig 1) abundant glassy perinuclear protoplasm and distinct intercellular cement substance producing a mosaic picture. The lumen of the lymph vessel may be obliterated (Fig 2). If a lumen still remains in such a vessel and it happens to be surrounded with a good deal of fibrous tissue stroma the structure may resemble a glandular carcinoma very much (Fig 6). The lumen of the lymph vessels then resembles the lumen of a gland, and the proliferated endothelial cells of the intima may then be taken for the atypical proliferation of epithelial cells which line the gland in many layers. Here the lumina, the small nuclei, the rich and glassy perinuclear protoplasm of the cellular cords help to differentiate this tumor as an endothelioma, particularly if other solid cellular cords also have lumina and if the younger circumferential areas of the growth show the invading, branching, net-like, narrow strips of proliferating endothelial cells in connection with the older, more solid, cellular columns.

The stroma frequently forms an alveolar arrangement so that such a tumor has been called alveolar sarcoma (Fig 2). Ribbert goes so far as to include every large round-cell sarcoma with well-developed alveolar stroma under endothelioma. Borst warns against calling every round cell sarcoma which happens to have an insignifi-

cant fibrillar reticular framework, an endothelioma. He demands the proof of the endothelial origin of the tumor and then names it endothelioma alveolare. On the other hand, the fibrous tissue stroma may be so prominent in some of the endothelial tumors as to simulate scirrhous carcinoma or even fibroma. The so-called endothelial cancers of serous membranes, as well as the diffuse colloid carcinoma or carcinoma gelatinosum of the peritoneum, are also to be included under lymph-angioendothelioma.

In addition to the points here made for a diagnosis of endothelioma, it is necessary that the tumor possess the general differential characteristics, already mentioned, which distinguish it from certain tumors of epithelial or connective tissue type. The special morphologic characteristics of a lymphangioendothelioma are well illustrated by the three following cases.

LYMPHANGIOENDOTHELIOMA INTRAVASCULARE OF UTERUS

The first case is one of lymphangioendothelioma of the uterus which occurred in the private practice of Dr Emil Ries, to whom I am indebted for the material.

This case is of general interest because very few endothelial tumors of the uterus have been reported, and of those found in the literature none presents an endothelial neoplasm so extensive as that shown in this case. It presents such characteristic microscopic features that a diagnosis was made from a cervix curettement before hysterectomy.

According to the literature, a curettement diagnosis of endothelioma of the cervix has been made only once by Gebhard, and in his case there were such extensive tumor masses in the parametrium that no operation was attempted.

Although the microscopic and diagnostic features described in the few cases found in the literature closely correspond with those I found in this case, not one of them shows the extensive, diffuse endothelial infiltration and proliferation present in this uterus, converting the whole organ, body and cervix into a solid neoplasm of the shape of a nearly normal uterus, the only portion escaping being a small area of the fundus.

The patient, aged 68, had four children and presented the clinical symptoms of uterine carcinoma.

Treatment.—A vaginal hysterectomy was done and, to our great surprise, a fairly normal sized uterus was found of very hard and fibroid like consistency, 3 inches (75 mm.) in length and 1½ inches (37 mm.) in breadth.

Result of Operation.—The patient died 11½ months after the hysterectomy with multiple metastatic tumors of both pleura, lungs, bronchial glands, diaphragm, liver, both kidneys, right adrenal, pelvic lymph nodes, rectum and left sacral plexus, all of which showed the same cell cords, with lumina and general structure as described in the uterine neoplasm.

Description of Growth.—The uterus was sectioned longitudinally. The uterine cavity was obliterated, except a small narrow slit extending ¾ of an inch (25 mm.) down from the fundus and just admitting a probe. This probe could also be introduced into the cervical canal for ¾ of an inch (25 mm.). The atresia extended from the middle of the cervical canal to the middle of the corpus. The anterior and posterior lips of the portio were enlarged and hard. The whole cervix and all the body of the uterus, except the fundus, consisted of a hard, tumor like mass, retaining the shape and size of a normal uterus but of a white, rather fibrous or scirrhous appearance. The fundus alone retained the usual color of uterine musculature for an area of 1¼ by ¾ inches (32 mm. by 25 mm.).

The cut surface of the growth had a smooth, white appearance with fine irregular and round mosaic like fields. The whole uterus except the fundus, appeared to be one large

tumor nodule. The mucosa was smooth, atrophic and glistening.

No metastatic tumors were found by Dr Ries at the time of operation.

Microscopic Examination.—Sections were made from all parts of the tumor and stained by the common and by special staining methods.

The whole uterus, except its fundus, showed a fibrillar ground substance, with solid cellular cords, cut in longitudinal and transverse sections (Fig 2). These cellular cords reminded one, in their distribution and character, of lymph spaces. Lymph vessels and lymph spaces traversing this fibrillar connective tissue were lined with proliferating epithelioid cell masses. These cords of cells appeared like cellular cylinders of large diameter (lymph vessel endothelioma) or as delicate cell strips of two layers of flat cells branching here and there (lymph space endothelioma). Both of these forms were combined in some of the fields. The larger endothelial cell masses had numerous so called lumina containing mucoid material (Figs 3, 4 and 6).

Other portions of the tumor looked like scirrhous carcinoma, and the dictum of Hansemann, that most scirrhous carcinomata of the uterus, stomach and esophagus are endotheliomata, will find by these specimens a substantial support. There were large areas with a stroma of dense fibrous tissue and alveolar arrangement of endothelial cells, as seen in glandular carcinomas (Fig 6). This organoid, carcinoma like type is found more often in endothelioma of lymph vessels than of lymph spaces. The so called lumina contained a delicate fibrillar network (Fig 5) or a homogeneous material (Fig 4) which stained pale blue with hematoxylin. With polychrome methylene blue the tissue stained blue, whereas the delicate network in the lumina stained red, that is, like mucin. Acetic acid also coagulated it.

Some of the alveolar cell nests could be seen to be continuous with delicate cellular cords and a network of lymph spaces with proliferating cells. With the Van Gieson stain the stroma of the tumor was seen to consist entirely of a fibrillar connective tissue reticulum, all involuntary muscle fibers having practically disappeared (Fig 2). The mucosa, lining the cavity of the uterine body, showed some interstitial hyperplasia, cystic and atrophic glands and a few small endothelioma metastases with characteristic lumina between the cystic glands.

LYMPHANGIOENDOTHELIOMA INTRAVASCULARE OF THE KNEE JOINT

This case occurred in the practice of Dr A H Ferguson.

Patient.—A night watchman, aged 36, noticed, a few months after a fall on his knee, a small growth at the outer side of the patella. When removed by Dr Ferguson it appeared as a circumscribed, encapsulated, oval and flat fibrous growth attached to the synovial membrane.

Microscopic Examination.—Microscopically the tumor consisted of a fibrillar connective tissue stroma which formed a network of long, wavy strands when cut longitudinally and circles when cut transversely, inclosing densely packed cellular cords of round cells with small nuclei and abundant, transparent, perinuclear protoplasm, with distinct intercellular cement substance (Fig 1). Some of these cellular columns had a large or narrow lumen which contained a small amount of finely granular or mucin like material, in others the lumen was obliterated and a solid cord of proliferated endothelial cells of the intima was formed, surrounded by strands of fibrous connective tissue. Only a few lumina were seen in the solid endothelial cell cylinders.

Subsequent History.—The diagnosis was lymphangioendothelioma, but was doubted because for 2½ years the patient had no recurrence of the growth. A nodular growth then appeared in the popliteal space, and after this had attained the size of a hen's egg Dr Ferguson operated again, but was unable to remove the entire growth because the internal popliteal nerve and the popliteal artery and vein appeared to be included in the lobulated tumor mass, which was found partially circumscribed, partially infiltrating the tissues in the popliteal space. Microscopic examination revealed exactly the same structure as that of the extrapatellar tumor removed 2½ years previously.

Amputation of the limb was not consented to by the patient, and he again attended to his regular duties as night watch man for eight months, when the growth in the popliteal space gradually enlarged and, for the first time, three and one half years after the appearance of the primary tumor, the inguinal glands showed metastatic enlargements, which made the prognosis bad, although the patient now insisted on amputation and was operated on. He died about eight months later with multiple metastases in many organs.

Remarks—I am fully convinced that if the man had consented to an amputation when Dr. Ferguson and myself advised it he would have lived. This case illustrates well the slow growth of endothelial tumors and the late metastases as compared with carcinomata and sarcomata, and that the early recognition of an endothelioma by microscopic examination should be an indication for thorough operative removal, with a very favorable prognosis.

LYMPHANGIOENDOTHELIOMA INTRAVASCULAR OF SUB-MAXILLARY GLAND

To contrast the two lymph-vessel endotheliomata just described microscopically with a so-called lymph-space endothelioma (although the two are frequently combined in one tumor in which case the lymph-space growth is probably nothing more than a secondary invasion by atypical endothelial cells). I will describe briefly a third case of a pure lymph-space endothelioma of the sub-maxillary gland occurring in a woman, 69 years old who was recently operated on by Dr. Allport (Fig 7).

A rich stroma of fibrous tissue contained in narrow slits rows of small endothelial cells of somewhat columnar shape in one or more layers. Those lined with but one layer of cells looked like tubular glands as long as a lymph-space lumen was still visible. When the proliferation of these morphologically characteristic endothelial cells became more pronounced distending the lymph spaces and producing a small island of densely packed cells characteristic lumina appeared.

The same structures also were found in the adventitia of the larger blood vessels (perivascular lymph-spaces) of this growth.

LYMPHANGIOENDOTHELIOMA PERIVASCULAR (PERITHELIO-MA)

The common tendency nowadays is to call the former angiosarcoma a perithelioma, in the attempt to indicate more accurately the histogenesis of the tumor. To what confusion this has led is best illustrated by a study of so-called peritheliomas as reported in recent literature in the light of our present anatomic or histologic knowledge of perithelium.

Such perithelial tumors have been reported from organs and tissues whose blood vessels are known to have no perithelial membranes at all, that is, from non-perithelial organs. Even in so-called perithelial organs, the capillaries never are covered with a perithelial membrane although some authors speak of perithelial tumors as arising from blood capillaries. Von Ebner-Koelliker⁶ state that the outer surface of endothelial cells of blood capillaries is in direct contact with the ground substance of the surrounding tissue. It is just as wrong to speak of a perithelioma as arising from a lymph vessel because perithelial membranes cover the outer surface of the adventitia of blood vessels only in a one cell layered mosaic of flat endothelium-like cells. They have only been found with blood vessels of certain organs called perithelial organs.

A perithelioma can not, therefore, be spoken of as arising from lymph vessels nor from blood capillaries. This, then, confines the term, perithelioma, to certain tu-

mors of the blood vessels of perithelial organs only. Yet so-called perithelial tumors or angiosarcomata do occur in non-perithelial organs which are morphologically similar, but only similar, to the true peritheliomata. From a histogenetic point of view it is desirable that the term perithelioma be reserved for a class of tumors arising from perithelium only. The term perithelium was applied by Eberth⁸ to an endothelium-like membrane of flat polygonal cells which lines the outer surface of the adventitia of the blood vessels of the brain and cord. The perithelial membrane must be differentiated from the perivascular lymph spaces of His,⁷ which he found surrounding the adventitia of arteries, veins and capillaries of the central nervous system (which has no lymph vessels). The perithelium is the outer lining of the adventitia of blood vessels, outside of which is the perivascular lymph space (Fig 9).

Driessen⁹ described a bone tumor as growing from the perithelium of blood capillaries and then named it endothelioma. This explains better than anything else the confusion which exists in the literature on perithelioma. Driessen first claims that the tumor started from the perithelium, although no perithelium has been found in the vessels of bone. He claims it started from perithelium, but names the tumor an endothelioma, because he appears to consider perithelial cells as the outer endothelial layer of a perivascular lymph space. Borrmann,¹⁰ in a very careful review on vascular tumors, remarks that Driessen's tumor was not a perithelioma because bone vessels have no perithelium, and it could not have been a perithelioma growing from capillaries because capillaries never have perithelium. In regard to the latter point, it might be well to remember that the more delicate structure of capillaries in various vascular regions is not yet sufficiently understood, and that for many blood capillaries it has been proven that they are surrounded with a cellular sheath, which Auerbach and Eberth speak of as vascular perithelium and others as capillary adventitia. Sheaths of peculiar cells are found around the capillaries of the carotid gland,¹¹ the coccygeal gland,¹² and the testicle.¹³ The coccygeal gland, discovered by Luschka¹⁰ and studied minutely by Krause,¹¹ Arnold¹² and Sertoli,¹³ has capillaries and small veins which have an adventitia of polygonal small cells.

Volkman wants to call these cells capillary adventitia cells and not real perithelial cells. Borst calls them perivascular cells or adventitia cells of capillaries, and says that their pathologic proliferation causes cylindrical cell mantles around capillaries like those of perithelial cells. Borrmann says that capillaries never have a perithelial membrane. Perithelial cells have also been described in the adrenals, pineal gland, mammary glands and salivary glands, and many authors consider them closely related to endothelial cells. It is necessary to emphasize the fact that the perivascular lymph vessels, which are found in many organs, also have nothing to do with perithelial membranes, so that the inner layer of the perivascular lymph vessel must not be mistaken for perithelium (Fig 9).

In order, then, to arrive at a histogenetic classification of these tumors we would have to be able to distin-

6 Virchow's Arch, vol xlix

7 Zeitsch f wiss Zool, vol xv, p 127

8 Ziegler's Beiträge, vol xiv, p 474

9 Virchow's Arch, vol cxvii, p 315

10 Virchow's Archiv vol xviii

11 Allgem Anat., 1876 p 323

12 Virchow's Arch vol xxxii and xxxiv

13 Virch Arch, vol xliii

guish whether the proliferation of cells had their origin in the true perithelium of blood vessels which lines the outer surface of the adventitia in perithelial organs (perithelioma), in the inner or both endothelial layers of a perivascular lymph space, or, in the adventitia cells or perivascular cells of blood capillaries

Pick and Rosthorn call all these endothelium-like layers perithelium and their proliferation a perithelioma. Borrmann also wants to use the name perithelioma for all these tumors, with the understanding that it is a kind of offspring of endothelioma. In case one is able to prove that the growth originated from the endothelium of the perivascular lymph spaces, it should be called endothelioma perivascular (Borrmann's periendothelioma).

Borrmann thinks he can distinguish morphologically between the two types as follows. Perithelioma, when the vessels are surrounded by many layers of cells, which are arranged radially and vertically to the wall of the vessel, periendothelioma when the vessels are surrounded by many layers of cells which are arranged concentrically around the wall of the vessel.

From a careful study of my perithelial or perivascular tumors, I am unable to verify Borrmann's morphologic distinctions, and in view of the existing uncertainties and controversy as to the nature of perithelium, endothelium of the perivascular lymph spaces and capillary adventitia cells, I prefer to use the name hemangioendothelioma perivascular, on account of the great histogenetic and morphologic similarity of perithelium, endothelium of perivascular lymph spaces and capillary adventitia. The three following cases illustrate such tumors.

HEMANGIOENDOTHELIOMA PERIVASCULARE OF LEFT ARM

The patient, a married Polish laborer, aged 38, came to Provident Hospital under the care of Dr J C Hepburn, to whose kindness I owe the history of the case.

Family History—The patient's father is living, aged 80, his mother is dead, cause unknown, two brothers are living and well, one sister is living, one died at the age of 8 years. The patient has never been ill, except that when 7 years old he had whooping cough.

Present Illness—The patient was first seen Dec 1, 1903. He had excruciating pain in the left deltoid region for six weeks. He had been unable to sleep and was losing in weight. He had a small growth for 15 years over deltoid without discomfort until six weeks before applying for treatment, when the tumor began to grow rapidly and became daily more painful. He had lifted and carried heavy pieces of lumber.

Examination—Physical examination revealed an oval tumor six inches long in the left deltoid region just below the acromion process, the surrounding tissue was inflamed. The tumor was just below the skin, which was freely movable over the growth, the latter being attached below. The tumor was hard and fibrous.

Operation—Dec 4, 1903. An encapsulated tumor was found attached to the intermuscular septum between the deltoid and triceps muscles, the periosteum was not involved. The wound healed by first intention, and the patient left the hospital in seven days and returned to work.

Description of Tumor—The tumor measured 13x12x8 cm. It was oval, with globular bosses, and was distinctly encapsulated except at two places. One portion of the growth was of stony hardness, 6x6½ cm. There were several cysts, one 2½ cm in diameter containing a clear yellow fluid. The cut surface was shining white, lustrous in the center and finely granular and friable at periphery.

Microscopic Examination—The tumor consisted of a tangled mass of blood vessels, whose walls were surrounded by a mantle of densely packed cells, round and spindle-shaped, and arranged in circular layers around and close up to the distinctly visible intima, the lumen of which was filled with red blood corpuscles. These cellular tubes were either confluent or sepa-

rated by myxomatous tissue (Fig 8). The patient was advised to have a complete excision of the upper extremity at once, but he did not consent and continued at work.

Subsequent History—The man returned, four months later, emaciated, unable to sleep, no appetite, temperature 102, pulse 120. He had had no pain for two months after the operation and was able to use his arm well. Then a bean sized, painful growth appeared at the site of the primary tumor and grew rapidly during the last two months to the tremendous size as shown in Figure 14. The tumor involved the whole external and posterior aspect of the upper three-fourths of the arm. It showed large nodular masses, with necrotic areas in the center of the two lower lobes. The axillary glands were enlarged. The growth was diffuse, the whole mass fixed and the skin adherent.

Second Operation—April 29, 1904, the whole arm, outer two thirds of the clavicle and the scapula were removed and the axillary glands carefully dissected out. Most of the wound closed by first intention and by the thirteenth day after the operation the man was walking about.

Result—This extensive growth microscopically was the same as the first small tumor. On June 2, 1904, Dr Hepburn showed the patient at the south side branch of the Chicago Medical Society. As far as known there has been no return of the growth.

HEMANGIOENDOTHELIOMA PERIVASCULARE OF MAMMARY GLAND

If we now compare with this tumor, which grew from a non-perithelial tissue (muscle sheath of the arm) a hemangioendothelioma perivascular of the mammary gland, which is a perithelial organ, we are at once struck by the histologic similarity of the blood vessels, cell mantles and myxomatous tissues between the cellular tubes (Fig 10), except that the cell mantles consist here principally of distinct round cells, whereas in the former case many spindle-shaped cells are intermingled with round cells. In both tumors the cells (Fig 11) are arranged in a circular manner around the distinct endothelial ring forming the intima. According to Borrmann's differentiation, a true perithelioma should have a mantle of cells which are radially arranged. When the cell mantle consists of cells arranged in circular layers (parallel to vessel wall instead of vertically) he wants to call it a periendothelioma. If both these tumors are false peritheliomata, it will be interesting to add here another perithelioma, which goes to show that this morphologic distinction can not always be relied on.

This case occurred in the practice of Dr Weller Van Hook, to whom I am indebted for the material.

History—A woman, aged 35, had a slowly growing tumor of a lymph node of the neck for three years, which a former operator removed as a tuberculous hyperplastic lymph node. A new growth rapidly appeared in the same locality, which he again removed as a tuberculous gland. A third growth appeared in the same locality, which was removed by Dr Van Hook and diagnosed by him as a neoplasm, probably malignant, although it had a capsule.

Microscopic Examination—A thin, fibrous tissue capsule was seen. No lymphoid tissue could be found anywhere. The whole tumor consisted of a dense network of capillaries, with distinct endothelial walls, surrounded by densely packed mantles of proliferating, round perithelial cells, with distinct nuclei and abundant transparent perinuclear protoplasm. The majority of these cells were arranged concentrically and parallel to the vessel wall, the remainder vertically (Fig 12).

HEMANGIOENDOTHELIOMA INTRAVASCULARE

These originate only from blood capillaries, and have been called by Ziegler, hemangioma hypertrophicum, by Nauwerck, hyperplastic capillary angioma, by Borrmann, capillary endothelioma. They consist of a stroma of fibrous tissue with gland-like tubes filled with blood.

and lined with one layer of endothelial cells which may be cubical or cylindrical in shape

Another type of these tumors consists of a stroma of spindle-shaped cells. Irregular or round areas of red blood corpuscles are seen to be enclosed by mantles of endothelial cells which represent the proliferated intima of blood vessels, forming several layers of epithelioid cells. The lumina of these cellular tubes contain erythrocytes or may be entirely obliterated in some portions of the tumor thus forming solid cords of cells

OTHER ENDOTHELIAL TUMORS

All the endothelial tumors are markedly subject to mucoid hyaline and amyloid degeneration, due to cellular metabolic disturbance, which leads to peculiar deposits of these products in the tissues. Hyaline metamorphosis of the vessel walls may lead to obliteration of the vessels or the hyaline substance may be a degeneration product of endothelial cell masses. Such endothelial tumors are called cylindromata (Fig 13)

Papilloma and cholesteatoma also are generally classified now with the endothelial tumors but can not be further discussed here

THE USE OF SHEET PARAFFIN IN LESIONS OF THE NOSE AND EYE

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Intranasal operations are for the most part simple procedures and eminently satisfactory both to the patient and to the surgeon. Sometimes following cautery work, however, removal of septal deformities, and even in some cases after turbinectomy the postoperative swelling is a very troublesome and even serious complication, giving rise to adhesions that may leave the patient in a worse condition as regards nasal respiration than before the operation. As is well known, the reaction following operation varies greatly in different patients—the mucous membrane of some being particularly sensitive to any irritant and intolerant of operative work or even of postoperative treatment. In such individuals the liability of adhesions forming even at a period comparatively remote after operation is a serious possibility.

Some cases are due to carelessness on the part of the patient or to insufficient after-treatment, this possibility, of course, is largely increased in transient patients or those from out of town whose finances or business affairs make more than a very short stay impossible.

It has been our experience that in these cases in which the after treatment has to be left to the patient or to the family physician adhesions are almost sure to follow.

The worst cases are those in which septal outgrowths occur in conjunction with hypertrophied turbinates, and especially when both are operated on with only a short interval between. Several experiences of this kind have made us extremely careful in this particular, and we feel much less anxiety on this account since using the paraffin splint.

We refer to the sheet paraffin and wax used by dentists. The paraffin sheets are five and five-eighths inches long, three inches wide and one-sixteenth inch thick, easily cut and bent in any desired shape and soft enough to conform to the shape of the space in which they are placed.

The accompanying illustrations will serve to show the shape we generally cut them and how they look in position (Figs 1 and 2). The posterior end is rounded and the edges are smoothed to facilitate its introduction and the anterior end is so shaped by cutting off the lower portion that its end hooks up under the front of the nose, being at the same time invisible at the anterior nares.

The various other devices in use for this purpose leave much to be desired. A long gauze tampon, such as is packed into the nose after turbinectomy, will not be tolerated longer than from twenty-four to forty-eight hours. It is very painful, retains the secretion and is an inviting field for infection. It is after the danger of hemorrhage has passed and the tampon has been

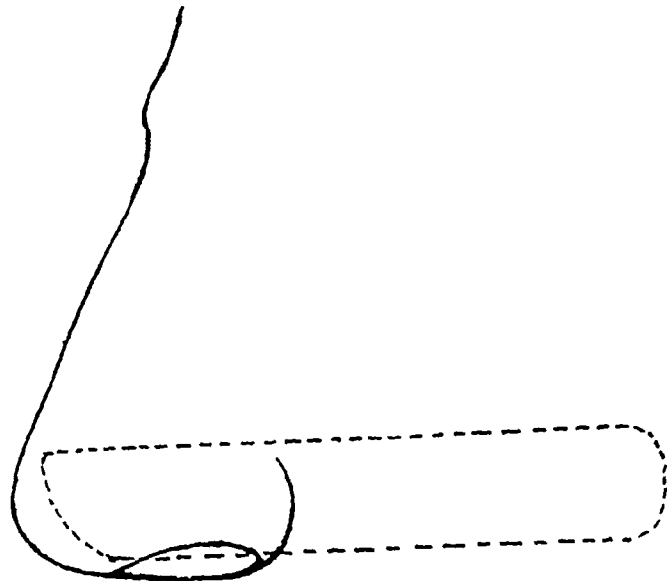


Fig 1—Showing splint in position in nose

removed that the indication for the paraffin splint arises. The splint could hardly exert any influence on the control of hemorrhage except in an extremely narrow nose or by acting as a foreign body, thus favoring coagulation. We have never used it, however, for this purpose.

The Bernay splints, though less disagreeable, are open to the same objections as the gauze tampon. The hard rubber and silver perforated splints are disagreeable and painful, they also do not extend far enough back to do much good in preventing adhesions. The expedient of keeping the postoperative swelling reduced by installations of adrenalin is in some cases satisfactory, but there are certain disadvantages. In the first place,

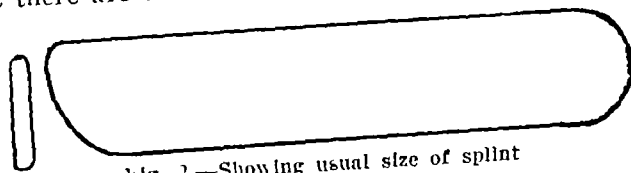


Fig 2—Showing usual size of splint

the patient is apt to neglect his visits to the office, and often firm adhesion results, though the patient be entirely ignorant of anything wrong.

Neither is it a wise plan to put in the hands of a patient for indiscriminate use a drug of such powerful properties. We have no doubt that it can seriously hinder the regeneration of tissue, and the fact that it has produced local necrosis after use must not be forgotten.

Only common sense surgical principles are indicated in the employment of paraffin. The shape of the splint varies with the area to be separated, being cut to suit each particular case. We handle the paraffin with clean hands and shape it with clean instruments, and as an additional precaution, just before introduction we scrape

the whole surface thoroughly thus rendering it absolutely sterile

We have never tried keeping it in solutions of the antiseptics in common use, as in the strength required they would prove an irritant to the mucous membrane, and in any event our method seems to be the most direct and practical

METHODS OF APPLYING THE SPLINT

Let us consider in detail some of the ways in which we use this material after it has been prepared as above

First After Cautey Work—Practically all this work is confined to the inferior turbinate, and is only done there in selected cases. Immediately after the cautey we apply a hot weak carbolic acid solution to control any oozing, we then use an antiseptic oil spray and introduce the splint as shown in the illustration. It is applied over the full length of the burn, care being taken not to push it too far back as that will produce a choking sensation. The width of the material as supplied being a little in excess of the distance from the anterior to the posterior nares in the adult, in cases where a groove is burned along the entire surface but very little need be removed.

It is best in these cases to have the splints full length, for the patient will speedily inform one as soon as it is too far back, and above all, it is desired to avoid a posterior adhesion, which might happen were the splint too short. After the splint is introduced and it is pushed up in place the anterior end is bent to the septal side and made to conform to that surface, rendering it invisible and more comfortable to the patient. We have yet to find a patient who complained of serious discomfort caused by the splints.

The after treatment is simple. We leave the first splint in for four or five days, having the patient report each day chiefly to see that the splint is in proper position, though in only a few cases have we found that they changed their position. We instill a few drops of weak adrenalin solution wash around the splint thoroughly and follow by an antiseptic oil spray.

As a rule the patient has some breathing space along the sides of the splints and sufficient space to expel the secretions, which, of course, are more abundant than under ordinary conditions. About the fifth day, as a rule, the first splints are removed, the site of operation thoroughly cleansed and inspected and new splints inserted. We do this not only for the purpose of cleansing and inspecting, but also because we have found that if left in longer the splints sometimes break in two, and thus we try to avoid, for while not a danger, it is annoying and apt to frighten the patient. This accident has happened several times in patients who did not return for after treatment, and while we have never had any difficulty in removing the different portions, such might happen if the patient should go to some other surgeon, especially as the material we use is exactly the color of mucous membrane.

The second splint also remains in about five days, the patient returning each day or every other day, according to the progress of the case. To be efficient, of course, the splint must remain in position till the membrane is healed. We advise against being afraid of leaving the splint in too long. Very often at the end of four or five days if the splint is removed the space will look clear and free, but if the splint be discontinued at this time and if the patient should remain away adhesions are almost sure to follow. Then too there is no particular necessity for haste in their removal. The fact that

we have had patients remain away from the office over a week without any treatment whatever shows that the paraffin splints are very well borne and can in no sense be considered as irritants.

In none of these cases was there any evidence of infection or odor due to retained secretions, despite the fact that the patients had gone so long without nasal cleaning.

Second, After Submucous Resections of the Septum—In these cases we use the Bernay splints for the first forty-eight hours, after which they are removed and the paraffin cut the shape of the Bernay splints, but slightly longer. The splints are applied on both sides and if necessary held snugly in place by a little gauze placed in the anterior nares, the outside of the splint. This gauze is removed as often as soiled. In these cases, of course, the important point is not so much the prevention of adhesions as the support given to the septum, and the paraffin subserves this purpose admirably (Fig 3). The after treatment is the same as that given under cautey work.

Third, After Turbectomy—Immediately after the removal of either turbinate, or a part of either, we invariably pack with a gauze tampon, as we have found that to be the only safeguard against hemorrhages, though we have never used the benzoin collodion dressing. This packing we remove, as a rule, in twenty-four

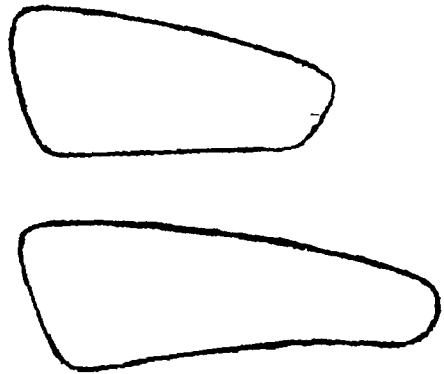


Fig 3—Showing splints after submucous resection

hours, or at the longest, forty-eight, and if the nose be very narrow or if there seems to be any chance of the postoperative swelling bringing the raw surface in contact with the septum we insert a paraffin splint as wide as the anterior nares will admit. We are careful, too, just before introducing the splint to remove any tags or shreds of mucous membrane that escaped detection the day before, as it materially assists the repair of the wound.

It is especially important in these cases where the least tendency to the formation of adhesions exists to allow the splints to remain in position till the wound has thoroughly healed, despite the protests of the patient or the number of times it is necessary to change the splint, for it is in these cases that the most extensive and troublesome adhesions occur, despite the fact that the entire turbinate has been removed at the operation. The after treatment is the same as described, though extending over a longer period.

Fourth, In Septal Deformities, Spurs and Ridges—In these cases, if possible, we do a submucous operation, though even in that case we generally insert a splint as it holds the flaps of the membrane down nicely and if any has been removed keeps the wounded surface separated from the turbinate. After treatment is the same as detailed above.

REMARKS

We do not wish to convey the impression that we resort to this expedient after all our intraocular surgery, though we do so very probably in over 50 per cent. We are certain that it has prevented adhesions for us many times when otherwise these would have formed, and it has thus simplified the recovery and saved the patient much discomfort from separating adhesions with a probe each day.

PARAFFIN IN EYE WORK

We have used this method in our eye work in practically only one condition. In cases in which there are extensive lesions of the conjunctiva as in burns, and adhesions are threatened or after operations for symblepharon we have used the paraffin cast.

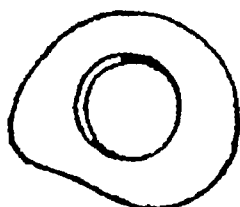
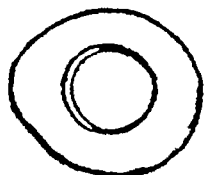


Fig. 1 - Splints used in eye work

A piece of the material is shaved down to about half its thickness, moulded over an artificial eye and a circle cut out in the center so that it does not encroach on the corner. It is then inserted into the conjunctival sac and allowed to remain there as long as necessary. The cleansing and after treatment can be carried out with very little difficulty and the material is well tolerated. We have used it in this manner in three cases and in all it proved satisfactory (Figs. 1 and 5).



Fig. 5—Side view of splints in Fig. 1

This method of employing paraffin so far as we are aware, is original. The senior writer of this article conceived this idea while working with Dr. Mueller at the Poliklinik at Vienna and spoke of it to him, owing, however to the difficulty of obtaining the material but very little opportunity was given for a trial of the method. This was in 1898. Since returning to this country, however, it has been used in our office continually, and its field of usefulness seems to extend. We offer this to those interested in this work, believing it to be a useful device in the class of cases that we have described.

Protection of the Eye in Radiotherapy of the Lids—The *Revue Gen. d'Ophthalmologie* for January contains a communication from Van Duyse and De Nobele describing the fine results obtained with radiotherapy applied to the eyelids and adjacent parts without fear of injuring the eye. The eye is protected with a shell made like an artificial eye which is placed over the eyeball after it has been anesthetized with cocaine. The shell causes no disturbance while it protects the eyeball completely. It is made of what is called "Paris enamel." Experiments with shells made of metal, glass and other materials showed that they were either irritating or were permeable for the Roentgen rays.

THE MEDICAL DEPARTMENT OF THE ARMY AND THE ADVANTAGES IT OFFERS TO THE YOUNG PRACTITIONER

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Medical students and young practitioners should be acquainted with the advantages to be gained by entering the Medical Department of the Army, and a brief survey of the subject may prove of interest and benefit to them, as well as reciprocally beneficial to the service, by drawing to it desirable candidates.

Representatives of the Medical Corps of the Navy and of the Public Health and Marine-Hospital Service have described the advantages to be derived from entering their respective services. While these undoubtedly offer attractions equal in degree to those held out by the Army, it is proper that all sides of the question should be presented in order that a young physician who makes up his mind to enter one of the public services may make his choice according to his taste and temperament. I shall endeavor to give a plain, unvarnished statement of facts concerning the Medical Corps of the Army to enable one to decide intelligently whether or not it will be to one's interest to enter the corps. Very few physicians who receive appointments as assistant surgeons ever leave the service, and it will be discovered that in those rare cases some good business opening in civil life, or the inheritance of a large fortune, or something of the kind, is the reason for their withdrawal. It is also significant that in many, if not in most instances, when men have resigned from the service they have re-entered it at a later date or have endeavored to do so. Two talented and accomplished young medical officers resigned from the Army a short time ago on the strength of flattering offers in civil life, and soon came back asking for readmission, but unfortunately they were barred by the age limit.

The Surgeon-General has had printed a pamphlet entitled "Circular of Information in Relation to Appointment in the Medical Corps," which gives all the data requisite to a complete understanding as to how to get in, pay, emoluments, duties, examination, etc., and can be obtained by request made to the Surgeon-General, U. S. A., Washington, D. C. I shall endeavor to point out to you on this occasion the advantages to be realized from an appointment in the Army based largely on my own experience.

First, let us consider the question from the abstract standpoint of personal advantage to be obtained from a commission. Temperaments and aspirations differ and some men have the idea that the opportunities of an able and ambitious surgeon would be confined within narrow limits by the discipline and subordination required by military life, and that he would have no chance of attaining the eminence offered by the wider field of civil practice. This is an error. An able man has as great, if not a greater, opportunity of rising to fame in the medical service of the Army as he enjoys in civil life. Laveran, a French military surgeon, elucidated the mystery of malaria and Reed, of our own Army, discovered the cause of yellow fever—two discoveries that have done more to advance sanitary science and to effect the practical reduction of human mortality than any others since Jenner demonstrated the protective power of vaccination. The names of Reed and Laveran are not

the only ones which have been rendered immortal by their work, there are many others. Beaumont, Billings, Otis, Woodward, Tripler and Sternberg are a few whose names occur to me at this moment. Baron Larrey, Esmarch and Longmore are military surgeons whose names are doubtless familiar to you all.

Indeed, in the greater freedom from business cares guaranteed by a fixed salary and in the ampler leisure afforded to the army surgeon by his well-defined duties, the man of scientific inclinations should find greater opportunity for scientific work which should give him reputation and standing than he would be likely to find in the midst of a busy, bread-getting practice.

The question of bread-getting is at once and finally settled for the newly commissioned Assistant Surgeon. But the question may be asked, Would not the opportunities for pecuniary gain be greater in civil life? I will answer, Only in exceptional instances, and it must be borne in mind that life and health are uncertain assets, and that lost health means lost practice and lost income in civil life, whereas in case of disability in the Army the pay goes on, and provision is made for retirement on three-fourths pay in case of permanent disability incident to service or for age. The pay and emoluments of officers are ample for all necessities at first, and later, when increased by rank, it will be found an easy matter to lay by a portion of the monthly pay for subsequent investment. It must be understood that the pay proper does not represent all the income of an officer by any means. In addition to his monthly salary with its percentage increase from length of service, he draws commutation of quarters at the rate of \$12 a month for each room to which he is entitled in case he is not furnished with quarters when on duty. His mileage when he makes an official trip without troops is usually greater than his outlay, he buys commissary and quartermaster supplies at the prices paid for them by the government, which is less than wholesale rates, fuel is furnished him at a cost of about one-half the amount his civilian neighbor pays for it, he is entitled to forage for two horses, he is supplied with stationery, and, finally, when he serves outside the continental limits of the United States, he draws an additional increase of 10 per cent on his pay. In case he is a married man, or has any one dependent on him, he can guard against their future needs by an insurance policy which during his life he can easily keep paid up. In short, the advantages arising from a fixed income are so many and so obvious that their consideration need detain us no longer.

Consider, for a moment, the difference between the practice of medicine in the Army and in civil life. The fundamental necessity for success in either case is thorough professional knowledge, backed up by some natural ability, but in civil life there is a third qualification which is as necessary as either of those mentioned, namely, business ability. In the Army, the latter is not an important factor, and the surgeon with business ability has no advantage in winning a record for efficiency over his brother officer who is not so gifted. The business side of a medical man in the Army finds its sphere in administrative work, which deals with reports and returns and the control of men, and that is a matter of special training. This is a part of the Army doctor's training that is as indispensable to his efficiency as his professional knowledge, and in certain contingencies even more so. I may remark, in passing, that it is this deficiency in the newly appointed volunteer surgeon,

his lack of knowledge of army methods, that detracts so from his usefulness in war time, no matter how profound his knowledge of medicine and surgery, and which causes disorder and confusion all along the line, with the dire results which we recently witnessed during our brief war with Spain.

In civil life, the physician seeks a practice, in the Army the practice seeks him. In civil practice, the physician must cater, to a certain extent, to his patient's whims, possibly to the degree of administering a placebo, in the Army, the practitioner is at liberty to exercise a somewhat firmer hand in dealing with the sick and to follow out his own ideas as to treatment. It is the duty of the Army surgeon to supervise the hygiene of the command and to recommend such measures as he may deem necessary to prevent or to diminish disease, and in doing this well he enhances his value to the government and tends to reduce his own share of professional work.

It may be of interest to those who have had no connection with the military service to hear something about the exact nature of the duties of a medical officer of the Army. The course at the Army Medical School, which all approved candidates are required to attend, includes, in addition to medical, surgical and sanitary instruction, a course of lectures on the duties of medical officers in time of war and peace, property responsibility, examination of recruits, certificates of disability, reports, rights, privileges, customs of the service and transportation of the wounded. On entering on his duties with troops he will at once realize the great value of this instruction and will be enabled to discharge his duties with much greater readiness and ease. There will, of course, be a great variety of medical and surgical work to be done, and opportunities to engage in special work for which the medical officer may be particularly qualified will not be found lacking—for instance, in surgery, in sanitation, in chemical, pathologic, microscopic and bacteriologic investigation, etc.

When the rank of lieutenant colonel or colonel is reached, especially the latter, the duties are almost certain to be of an administrative character, as commanding officer of a large general hospital or as chief surgeon of a department.

Desire to attain the grade of surgeon-general is, of course, a laudable ambition, and the office may be reached by any capable and worthy medical officer who demonstrates qualifications of the proper kind. The office is held by the incumbent as a four years' detail as it is in the Navy, but the President may prolong the detail. Even should a surgeon-general revert to the grade from which he was promoted, when he reaches the retiring age he is retired as a brigadier-general.

There is another marked advantage which the military service offers to a physician, especially to a young man who is just starting out in his practice. In civil life the doctor must equip his office with books, instruments and furniture at his own expense, he must buy his own medicines, if he is doing a country practice, pay the rent for his office and furnish the forage for his horse or horses. In the Army, the government furnishes all these liberally and, in addition, all the leading medical journals published in the English language. This effects a very considerable saving in the course of time and is well worthy of serious consideration.

In the military service, one does not have the opportunity of making a permanent home, but is subject to orders and must be ready to shift his *lares et penates*

Special Article

THE PHARMACOPEIA AND THE PHYSICIAN

GENERAL DISINFECTANTS

CHAPTER IX

General Introduction to the Subject of Disinfectants and Antiseptics

when his orders come to change station. The allowance of baggage transported at public expense, however, is ample for all practical purposes. A first lieutenant is allowed 6 000 pounds, a captain 7 200 pounds and a major 8 100 pounds. These amounts will cover all articles necessary to house-keeping in the Army, and if the officer is unmarried the allowance will be found much in excess of his needs. Besides this, the government allows a maximum of \$100 for each horse allowed and transported for a mounted officer and also transportation for an attendant. A change of station, therefore, ordinarily can be made without the incurrence of any expense to the officer concerned. His own personal expense for railroad fares and sleeping cars is more than covered by his mileage allowance, as he is allowed a first-class ticket and 1 cent a mile in addition. It will be seen that a move from one post of duty to another is not to be dreaded on account of expense.

Naturally a subject of much interest to an army officer is that of promotion, because with it comes greater authority and increased pay. What is the prospect in the medical department for a satisfactory rate of promotion? At the present time the organization of the department is not wholly satisfactory in this respect, Congress having added too many officers of the lower grades and too few of the higher grades in reorganizing the corps early in 1901. A new bill, having in view an increased efficiency of the medical department, was prepared by the Surgeon-General two years ago, and at the last session of Congress it was passed by the Senate, and the sense of the House of Representatives was largely in its favor, but the ruling of the speaker blocked its passage. The President, the Secretary of War, the Senate, the Military Committee of the House, the American Medical Association and the country at large are all in favor of the passage of this bill, and the report of the committee of medical officers having it in charge shows that great progress has been made and the probability of securing favorable action at the present session of Congress is most gratifying. This bill increases the higher grades and places the corps on a basis much more attractive to an ambitious young man. Its passage at an early date seems absolutely assured and, as over 20 vacancies exist at present in the corps, an early entrance is highly important as promotion goes by seniority and a stand a few files higher in the list means the attainment of a superior rank a year or two in advance of those who may enter a few months later.

In conclusion it may not be amiss to say a few words concerning social life in the Army.

Garrison society, as a rule is very pleasant and I feel safe in saying that the surgeon will find the officers and their families almost universally delightful people. For the socially inclined young man there is no dearth of entertainment in the way of dinners, card parties, private theatricals etc. especially at the larger garrisons so that one need not fear that he will be deprived of the amenities of good society found in civil life.

Variations in Normal Urine—Evans and Moore, as a result of a series of experiments, state that in a normal individual the composition and character of the urine may vary widely within short periods of time, and that even the twenty four hours' urine may differ considerably from accepted standards for a man of average size. They also state that the urine excreted during the forenoon is in most respects noticeably different from that of other parts of the day.—*Montreal Medical Journal*

The important subject of antiseptics embraces so many different agents that are used in such a variety of conditions that any convenient consideration of them according to their uses, or according to the principles that are involved, must necessarily be an arbitrary one. For our purpose we shall consider them under three heads: (1) General disinfectants and antiseptics, (2) local disinfectants and antiseptics, and (3) internal antiseptics. Some substances will require consideration under all three headings, but even this will be found preferable to giving, for example, all of the manifold uses of such an article of mercuric chlorid in one place.

Antiseptics were used long before the causes of fermentation or of putrefaction were known, and it would have been remarkable indeed had man failed to perceive the effect of those substances which are capable of inhibiting a process so commonly encountered. The Egyptians preserved the human body against the attacks of putrefactive organisms, without any evident knowledge of the character of the organisms causing decay, by means of balsams which contained such antiseptics as benzoic and cinnamic acids. The epoch making discoveries of Pasteur followed as there were by the favorable reports on the use of phenol, or carbolic acid, by Lister, and the subsequent discovery that other substances possessing great antiseptic power were even less toxic to man, gave tremendous force to the pendulum, which was carried entirely too far by the efforts of well meaning enthusiasts, and in its backward swing much unnecessary skepticism has been aroused.

While the subject of general disinfection does not necessarily form a part of the physician's daily consideration, there are occasions when he is suddenly confronted with the necessity of directing such work, and on the thoroughness with which he does it will depend the safety of other members of the community. While there is no great difficulty in securing thorough disinfection it is absolutely necessary that certain rules be rigidly complied with and this can not be done without an exact knowledge of the object that is to be accomplished and of the means with which the accomplishment is to be brought about. There is probably no condition where a little knowledge can prove to be more dangerous than in this very matter of disinfection, and we therefore have no apologies to offer for going into detail on a subject that may be considered commonplace or well understood.

Sunlight and Heat

The best of all disinfectants is bright direct sunlight, coming into immediate contact with the individual germ, not merely shining on one side of a thick garment or carpet, or on small masses of sputum, blood, pus or decaying meat, but shining on and penetrating each individual microorganism. When this can be accomplished all germs—not all spores—are killed in a few hours. But sunlight is not dependable unless all of the necessary conditions can be rigidly complied with, as may be done with impervious flat surfaces (floors), or linen and other thin garments, both sides of which may be exposed to the direct rays of the sun. The disinfection of articles infected with the more virulent pathogenic organisms usually requires other, more directly active means than that of sunlight, with the attendant danger of further dissemination, and chemie disinfectants or heat must then be employed.

The direct flame instantly destroys all forms of microscopic life. Dry air, heated to 160° C (320° F), kills all disease germs—but not all spores—in one hour, but wood will begin to char at 180° C (356° F) and even lower, so that dry heat is not applicable as a certain means of disinfection in all cases. Simple drying kills bacteria, but masses of sputum or other organic matter may preserve the organisms in their interior for an indefinite period, while spores are thus preserved for years.

Moist heat water or air saturated with aqueous vapor, heated to 75° C (167° F), is rapidly fatal to most bacteria. Water containing typhoid bacilli is rendered much safer by heating to even this comparatively low temperature for ten minutes. Boiling water, on the other hand, will kill even spores in ten minutes or more if they are not protected in small masses. When such masses do exist 1 per cent of soda or soap should be added to the water to dissolve the albuminous and other organic matter and at the same time to raise the boiling point slightly. Metallic instruments do not rust in water containing caustic soda, washing soda, baking soda or borax.

Moist steam, or air which is *super-saturated* with steam, is rapidly fatal, but superheated dry steam is not so quickly fatal as is the moist at a much lower temperature. Pressure, moisture and increased temperature increase the effectiveness of all methods of disinfection. Moist steam penetrates better than dry air, but heavy fabrics may protect micro-organisms, and particularly spores, for a considerable time, and many articles, such as mattresses, can not be readily disinfected even in this way.

Chemical Disinfectants

Bedrooms and their contents may be disinfected by the now official

LIQOR FORMALDEHYDI—U S—Solution of Formaldehyd, containing about 37 per cent by weight of formic aldehyd, an oxydation product of methyl alcohol. This substance may be applied directly by washing or spraying, or it may be used in the form of vapor. For the latter purpose the windows and doors are tightly closed, paper being used to stop up the crevices, carpets should be removed or suspended and all drawers and closets opened and their contents so placed that the vapor will readily reach and penetrate every particle of fabric. Formaldehyd solution is then vaporized either in the room or through the keyhole with enough water to saturate the air in the room. Considerable loss of formaldehyd occurs through decomposition during vaporization by heat and it is therefore preferable to saturate sheets with the requisite quantity and suspend them in the room which is to be disinfected or, better still, the solution may be sprayed from an atomizer. The keyhole is then plugged and the room allowed to stand for from 12 to 24 hours. Novy advises 150 c.c. (5 fl. oz.) of the 40 per cent solution corresponding to about 165 c.c. (5½ fl. oz.) of the official, for each 1,000 cubic feet of air space. To increase the efficiency of the formaldehyd 3 liters (3 quarts) of water are vaporized into each 1,000 cubic feet of space. If the atmosphere is damp less water will be required of course. Under ordinary conditions it is cheaper to destroy inexpensive mattresses than to disinfect them thoroughly. If they are of straw, destruction is most readily accomplished by burning them out of doors.

CALX—U S—Lime calcium oxid constitutes an inexpensive and very useful disinfectant that has a number of widely varying uses. Infected urine, vomit and feces may be thoroughly disinfected by being received into a vessel that contains freshly prepared milk of lime. It is essential that this be freshly prepared, as calcium hydrate rapidly absorbs carbon dioxide from the air and is thereby changed into the inactive calcium carbonate. Milk of lime may be prepared by putting a few pounds of lime into an iron pot and adding about half as much water, the lime rapidly falls into a dry powder with the evolution of heat, to this powder add three times as much water and stir well. The resulting mixture will keep for several days without deteriorating sufficiently to be inert. There are, of course, several precautions to be observed. The lime must be recently calcined, or fresh, and the person who slakes it should be careful to avoid the irritant dust which arises during the process, then, too, the heat generated may be sufficiently high to char wood or to set fire to readily combustible materials. For disinfecting feces or other substances they should be thoroughly stirred with an equal quantity of the milk of lime or better still with twice the quantity, the mixture being allowed to stand for two hours.

Milk of lime is also useful for disinfecting floors, cellars, cesspool—after draining and even walls when they are not subject to injury. It must always be remembered that this

whitewash rapidly absorbs carbon dioxide and thus becomes inert, hence the mixture is an efficient disinfectant, but is not useful as an antiseptic.

Unslaked lime is a cheap and very efficient means of destroying animal matter and is also useful for absorbing moisture in damp cellars. As noted before, certain precautions are always to be taken in connection with this really active chemical substance. Cesspools are difficult to disinfect. Large quantities of milk of lime are effective, but the contents must be thoroughly mixed with the disinfectant, whatever its nature.

HYDRARGYRI CHLORIDUM CORROSIVUM—U S—Corrosive Mercuric Chlorid, bichlorid of mercury, mercuric chlorid or, as it is most commonly called, corrosive sublimate, will be considered more extensively in connection with local antiseptics. It has, however, a number of very important uses in connection with disinfectants.

Corpses of persons dead of an infectious disease should be immediately wrapped in cloths saturated with a 1 to 1,000 solution of mercuric chlorid. The addition of 20 per cent of glycerin to the solution of mercuric chlorid will prevent the rapid evaporation of the water, which leaves the mercuric chlorid as a dry powder in the cloth. Water which has been used to bathe a person suffering from an infectious disease, such as typhoid fever, should be disinfected by heating to near the boiling point or by the addition of a liberal quantity of milk of lime or a much smaller quantity of mercuric chlorid. If the bathtub is of metal, this chemical should not be used, but phenol or cresol may be substituted.

FERRI SULPHAS—U S—Ferrous Sulphate, preferably the impure or crude article, commonly called copperas, is an excellent deodorizer for animal excretions, the iron uniting with the albumin and the acid with the ammonia, it is not a very active disinfectant.

CUPRI SULPHAS—U S—Copper Sulphate, or blue vitriol, may be similarly used, but it is much more expensive and possesses no marked advantages over copperas as a deodorizer.

SULPHUR SUBLIMATUM—U S—Sublimed Sulphur, or flowers of sulphur, is frequently burned as a disinfectant, in rooms which contain nothing which can be injured by the corrosive action of the resulting sulphurous oxid. It is not so frequently used now that formaldehyd affords a more satisfactory means of disinfection but it is cheaper and may be used to advantage in cellars and in empty rooms, that can be thoroughly sealed. Hoppe Seyler recommends that 15 gm. (½ oz.) be burned for every cubic meter (cubic yard) of space. This would be equivalent to about 1,500 gm. (33 lbs.) for 1,000 cubic feet. Rooms should be left tightly closed for from twenty four to forty eight hours, then the fumes of acid still remaining may be readily absorbed by sprinkling ammonia in the room. As with formaldehyd disinfection, the vapor must come into actual contact with the micro-organisms and the atmosphere should contain moisture. This latter requirement is usually met by burning the sulphur in a double vessel, the outer one containing water.

The gas that is generated by the burning of sulphur is very poisonous to man, due to its local corrosive action. Spasmodic closure of the glottis may occur, causing death. Sulphurous oxid, the substance that is thus generated, remains free in mixtures of organic matter longer than free chlorine, hence it is a more effective bactericide.

CALX CHLORINATA—U S—Chlorinated Lime, popularly, though improperly, called chlorid of lime, is a ready source of chlorine and is a very convenient and inexpensive disinfectant suitable for many of the purposes for which sulphurous oxid might be used. Chlorine, like sulphurous oxid, is very corrosive, attacking metals, and bleaching and destroying fabrics. Chlorinated lime is useful sprinkled about urinals, damp cellars, outhouses, stables and drains. It rapidly deteriorates on exposure to the air and is not efficient unless it has a very strong odor of chlorine.

The various chlorids that are sold at fancy prices are usually feeble and are in no wise superior to a readily made mixture of a quarter of a pound of chlorinated lime with half a gallon of water. The admixture of an acid at the time of using causes the rapid liberation of chlorine and increases the disinfectant action.

Liquor Soda (SODIUM) — U. S. — Solution of Chlorinated Soda, the so called Labarraque's solution, is but another form of a chlorine compound. It has the one advantage of being free from insoluble caustic material.

Phenol — U. S. — Phenol the Acidum Carboicum of the U. S. P. 1890 is much more expensive and not nearly so efficient, as a disinfectant as

Cresol. — U. S. — Cresol has been included in place of the formerly official crude carbolic acid. It is a mixture of the three isomeric cresols found in coal tar and is a useful and highly efficient disinfectant and antiseptic.

Liquor Cresolis Compositus — U. S. — Compound Solution of Cresol consists of a mixture of equal parts of soap and cresol. When properly made this mixture is an admirable substitute for any one of the numerous soluble or semi soluble proprietary preparations containing cresol, such as creolin, cresolin, lysol, lysitol and a host of others too numerous to mention.

Compound solution of cresol is practically identical with the Liquor Cresoli Saponatus of the German Pharmacopoeia, it is miscible in all proportions with water, and as noted above, is a reliable and readily available disinfectant.

One part of the compound solution of cresol added to twenty parts of very warm water is useful for the sterilization of surgical instruments and a slightly weaker solution made by adding one part to thirty of warm water, affords an excellent disinfectant for the hands.

Potassium Permanganate — U. S. — Potassium Permanganate the chameleon mineral of Scheele, attacks all forms of organic matter and is generally useful for the destruction of foul odors but is not very useful as a disinfectant. It will be considered at greater length in the succeeding chapter.

The strong mineral acids are destructive to bacteria but their application as disinfectants is necessarily very limited. As noted before mercuric chlorid is to be classed with the most powerful of all disinfectants in general use, one part in 10,000 being fatal to spores. Like all other chemical disinfectants its activity is increased by heat. It precipitates albumin and its activity is, therefore, materially lessened by the presence of any appreciable amount of organic material, this disadvantage of mercuric chlorid may be obviated in part by the addition of an equal amount of sodium or ammonium chlorid (or a small amount of hydrochloric acid), the tablets found on the market for preparing the solution always containing the requisite quantity of one of those salts. As it attacks metals it is not suited for the disinfection of instruments or metallic vessels. One part of mercuric chlorid in 50,000 parts of water has been demonstrated to possess decidedly antiseptic properties. Its comparative non volatility, its property of attacking metals and of combining with albumin, and its extreme toxicity limit its field of application, but it remains by far the cheapest antiseptic we have for general use.

Copper sulphate shares with copperas (ferrous sulphate) the power of deodorizing decomposing organic matter though it is but little used for this purpose. It has recently been claimed that the merest traces of copper sulphate, or of copper, in water readily destroy the bacillus of typhoid fever, or at least completely inhibit its growth, even though the copper is present in quantities too small to interfere with the use of the water for drinking. The results of different investigators are not uniform, however, and some maintain that the antiseptic power of copper and its salts has been greatly overestimated. The soluble salts of zinc, particularly the chlorid, have also been used for disinfecting purposes, but as they

share with copper the disadvantage of being comparatively expensive, without any accompanying material advantages, a more detailed consideration of these substances may be omitted in this connection.

Clinical Thermometers and Hypodermic Syringes

The disinfection or sterilization of clinical thermometers and of hypodermic syringes and needles deserves especial mention. With the present comparatively low price of clinical thermometers there is little or no excuse for not having an individual thermometer for at least every patient ill with an infectious or a contagious disease or a continued fever. But, even this precaution, desirable as it certainly is, does not obviate the necessity for disinfecting or sterilizing the thermometer. The necessary disinfection may be effected in a number of ways, the thermometer may be dipped for a few minutes in strong phenol, the solution of cresol, or in the now official solution of formaldehyd, after which it is thoroughly rinsed in water. Where an individual thermometer is provided it may be sterilized by keeping the bulb immersed in 75 per cent alcohol, a saturated solution of boric acid, the official liquor antisepticus, or in a mixture of equal parts of antiseptic solution and of solution of hydrogen dioxide. It must appeal even to the least careful that the disinfection of clinical thermometers is a precaution so essentially important that it should never be neglected.

The hypodermic syringe and needle should be disinfected with strong phenol or cresol solutions, solution of formaldehyd or by repeated washing with very hot water, as a purely routine procedure. When a syringe and needle are known to be infected the disinfection should be as thorough as that of other surgical instruments.

Solutions intended for hypodermic injection can be sterilized by boiling when this does not cause decomposition. With the now widely used hypodermic tablets it is preferable to boil the necessary quantity of water, or better, distilled water, for a minute or two, then add the tablet, avoiding all unnecessary handling, and heat sufficiently to insure thorough solution. Cocain, being readily decomposed, can not be boiled, but the solution may be sterilized by heating to about 80° C (176° F) for thirty minutes on two successive days. It will usually be found to be preferable, however, to use freshly prepared solutions that have been made in a sterile bottle with recently boiled and sterile distilled water. Eucain and stovain solutions may be boiled, but these substances themselves are not entirely free from objections.

Under the subject of internal antiseptics we shall have occasion to mention the disadvantages of sterilized milk, but here we may call attention to the widespread use of formaldehyd, salicylic acid and other chemical antiseptics for the preservation of foods. While we are by no means certain that minute quantities of many of these chemical antiseptics are in themselves injurious, we have ample authority for the opinion that their continued use in appreciable quantities is by no means beneficial. Schmiedeberg regards the constant use of even small quantities of salicylic acid, for a continued period, as unwise in the present state of our knowledge, and Sollmann says that the use of formaldehyd can not be too strongly condemned, because of the specific irritation of the mucous membranes which it causes.

The whole subject of food preservatives, however, while it is a vitally important one, and one in which the physician should, and indeed, must be actively interested, is entirely too extensive to be discussed at length in connection with the present series of articles.

1 Where an inodorous deodorant is required it will be found that the Liquor Zinci et Aluminii Compositus of the National Formulary will give better and more uniform satisfaction than proprietary articles of the same type. It is made as follows:

R	Zinc sulphatis	5ss	100
	Aluminii sulphatis, aa	gr v	
	Naphthol	gr v	3
	Oil thymol	gr xv	1
	Aqua, q s ad	℥j	500

The salts are dissolved with the aid of heat and the volatile substances added to the solution.

Still another preparation of the same type is the Liquor Zinci et Ferri Compositus — N. F.

2 In this connection we find the following quotation apropos, taken from Wood's "Therapeutics," page 823. "There are not many affairs in life in which the public has been so superabundantly fleeced as in the matter of disinfection. A most extraordinary part of this swindling is the ease with which distinguished members of the medical profession have given certificates of efficiency and value to comparatively inert and extraordinarily expensive proprietary compounds. Oddly enough, the cat that has drawn the chestnuts out of the fire for avaricious manufacturers has not even had the sense to smell the odor of its own paws when burning." It is evident that Dr Wood knew less of the resources and the wiles of nostrum makers, and their shrewdness in duping physicians, than he supposed, else he would not think it extraordinary that so many have been deceived.

The subject of preservatives, however, is also of interest in connection with medicines and medicinal preparations. The antiseptic action of alcohol, glycerin, sugar and of volatile oils is well known and generally recognized, while not of sufficient importance to be considered in connection with general disinfection, these substances are widely used as preservatives not alone for medicinal preparations and foods, but also for other substances and materials.

(To be continued)

Clinical Reports

A CASE OF EPITHELIOMA OF THE FACE

TREATED BY THE ACTUAL CAUTERY, THE X-RAY AND BY INCISION *

J H WOODWARD, BS, MLD
NEW YORK CITY

History—Mr —, about 70 years of age, presented in the spring of 1903 a small ulceration one-fourth of an inch in diameter in the left side of his face, near the ala of the nose, which had existed more than a year. The area of disease was limited to the immediate neighborhood of the superficial ulceration.

Treatment by Actual Caution—In May, 1903, I burned it out with the galvano cautery. The wound so made healed promptly without incident, leaving a small, smooth cicatrix.

Treatment by Röntgen Ray—In November, 1903, ulceration in the cicatrix had begun. Influenced by the very favorable published and verbal reports of the beneficent effect of the Röntgen ray in curing epithelioma of the face, I referred my patient to a very competent surgeon, thoroughly familiar with x-ray therapeutics, for treatment by that method.

Report—To him I am indebted for the following notes of the case while under his care.

On examination I found a spot about as large as a small, ordinary white bean about three-quarters of an inch beyond and above the ala of the nose, left side. The outer half had healed, the inner part was ulcerating. There was very little induration on the floor and sides of the ulcer. He came to me November 4 and received about three treatments a week until Christmas, making in all twenty two exposures. The treatments were made with a medium sized tube, medium vacuum, at a distance of six inches, with an exposure of ten minutes, the face, head and chest were protected by plates of lead and tinfoil. The tube was influenced from a 12 32 inch plate, Wait & Bartlett static machine. Very little effect was observed after four weeks' treatment. The ulcer seemed to have some source of irritation. This was found to be too frequent examination with the finger. The ulcer was then protected with a cotton or rubber tissue and collodion dressing, which was removed during the exposure to the rays. The effect was magical: the ulcer closed at once and remained closed. At this time a lead glass tube, with a terminal diameter of one inch was used for the remainder of the exposures. This was placed within half an inch of the diseased surface, with an exposure of five minutes. After an interval of two weeks (i. e., beginning Jan. 12, 1904), four more exposures were made at intervals of three days in order to make sure all diseased tissue was destroyed.

The x-ray treatment, therefore, practically extended over a period of three months and was thoroughly and painstakingly given by a conscientious operator.

Treatment by Excision—Early in April, 1904, or a little more than one month after the last x-ray exposure, the patient came to me for re-examination. Ulceration had again broken out in the cicatrix. At this time I was strongly tempted to do only a curettage. Fortunately, however, my suspicions had been sufficiently aroused, and on April 6 I extirpated the growth. The operation was made through what appeared macroscopically to be healthy integument at a distance from

the apparent disease down to healthy periosteum and healthy perichondrium. The latter was curetted away, because it lay in rather close proximity to the ulceration. The resulting wound was at least one inch in diameter and nearly circular. It was allowed to heal by granulation in order to facilitate later the detection of any cancerous tissue that might have been overlooked, and had closed completely by May 7, leaving a small, smooth scar.

The excised tissue was taken to Dr F E Sondern for examination, with the especial purpose of ascertaining whether the operation had included the entire diseased area. He reported as follows:

"The cut specimens show a typical picture of epithelioma. Between the lesion proper and the periphery of the specimen there is an area of normal epidermis, the corium showing a small amount of round cell infiltration only. Very near to the periphery, however, the epidermis shows an irregular downward growth into the corium, which shows a decided inflammatory reaction. This looks like an early stage of the disease at the periphery of the specimen."

Further History—I was surprised to find that the microscopic examination had revealed a more diffuse cancerous infiltration than had been supposed possible in this case. The operation had not circumscribed the growth.

On May 14, 1904, a small collection of pus about the size of a pinhead had developed in the part of the cicatrix nearest the inner angle of the eye. This was evacuated and the small cavity treated with pure carbolic acid. On May 16 the same spot was curetted and in two days the wound had healed.

On June 1, 1904, suppuration had recurred in the same place, and on June 3 the upper portion of the cicatrix and half an inch or more of integument between it and the inner angle of the eye was cut out. This wound was closed by three sutures and healed by primary union.

Report—Dr Sondern reported on the excised tissues as follows: "The cut specimen shows a typical picture of epithelioma. There is a proliferation downward of epithelial invaginations into deep tissues and numerous epithelial pearls. There is also some inflammatory round cell infiltration of corium and deeper tissues."

On Oct 5, 1904, the cicatrix was almost invisible and nothing pathologic was discoverable in the wound region. In November, 1905, eighteen months after the last operation, his only symptom was itching in the cicatrix. I was not able to discover anything pathologic in or about the scar, which was almost invisible, smooth and not adherent. The adjacent skin was normal. Inasmuch as a scar on his forehead carried for many years itches more or less, that symptom in the operation scar may be of no importance.

In May, 1903, the ulceration appeared as innocent as an epithelioma can, and it seemed a simple matter to effect a cure with the actual cautery. A more favorable case for treatment by the x-ray than this was in November, 1903, could not be imagined. Naturally, it is not possible to state exactly how far the disease had infiltrated the skin prior to the x-ray treatments, but macroscopically the disease was limited to a very circumscribed area. After the x-ray exposures, however, it was clear not only that there had been an absolute failure to cure, but that the area of disease had increased considerably. Possibly the actual cautery had acted as an irritant, inasmuch as it had not been applied with a sufficiently free hand to kill all the cancer cells. It is certain that the x-ray had operated as an irritant causing the disease to spread more rapidly in every direction than it would have done if undisturbed. The lapse of time alone does not account for the marked changes in the conditions, especially those that occurred between November, 1903, when the x-ray treatment was begun, and April, 1904, five weeks after the last x-ray exposure had been made.

Experience in this case teaches that the ancient and honorable method of early and complete excision should have been the method of choice. Objection to excision

* Read before the Society of the Alumni of Bellevue Hospital.

of growths about the face is urged on the assumption that noteworthy disfigurement is a necessary consequence of cutting operations. We know that such arguments are not valid when excision is made in the incipency of the disease. In all other cases the question of cure is paramount.

A remedy for cancer that is lauded because its application does not disfigure the patient must possess curative properties superior to any other known treatment to entitle it to respectful consideration. In this case, the history of which has just been related, the x-ray proved to be not only a dismal failure as a cure but it was positively harmful both in wasting time and in stimulating the cancer's growth.

Bodine's method of using cocaine locally enables the surgeon to avoid the objection to and the dangers and disagreeable features of, general anesthesia, and promotes the practical certainty of a painless operation. In my patient's case a positive history of attacks of true inguinopectoris was an important factor. It seemed advisable at the operation of April 6, 1904 to give the patient a hypodermic of morphin before injection of the cocaine solution was begun, because it is the systemic antidote to cocaine and also the most potent agent we may employ in inguinopectoris. This precaution was probably unnecessary. In the second cutting operation the use of morphin was omitted. In both instances no untoward cardiac symptoms were observed either during or subsequent to the operation.

18 West Fortieth Street

A CASE OF SYPHILITIC DACTYLITIS OF THE TOE

ASILEY PASTON COOPER ASHURST, M.D.

Surgeon to the Out Patient Department of the Episcopal Hospital
PHILADELPHIA

Patient—R. I., aged 40, applied to the surgical dispensary of the Episcopal Hospital April 20, 1904, for treatment of his left foot.

Examination—The foot was moderately swollen, with two areas of superficial ulceration on the dorsum, and with the middle toe the seat of a swelling so typical of syphilitic dactylitis as seen in the fingers, that the specific nature of the lesions was readily determined. The patient stated that the ulcerations of the dorsum of the foot had persisted more or less in their present form for a period of eighteen months and that the toe had been in its present state for about six months. He had tried various salves and ointments, but so far no form of application had proved of any avail. On further inquiry it was learned that twelve years previously the man had had a sore on the penis, which, although accompanied by suppurative inguinal buboes, was nevertheless followed later on by an evanescent skin rash. Antisyphilitic treatment had been employed for about six weeks. The accompanying illustration, kindly made for me by Dr. R. S. Hooker, shows very well the appearance of the foot and toe when the patient came under my treatment.

Treatment and Result—The ulcers were dressed locally with dilute citrin ointment, and iodid of potash was administered internally. Improvement was rapid, the ulcers healed, and the dactylitis disappeared, so that in the spring of 1904 the foot was practically normal. I heard from this patient in November, 1905, and learned that he has taken the potassium more or less regularly ever since being under my care, he says he learned by experience that soon after stopping the medicine he was prone to develop ulcers or sores in some part of his body. His foot has given him no further trouble.

Syphilitic dactylitis was first accurately described by Dr. R. W. Taylor,¹ of New York, in 1871. The affection

had been alluded to previously by one or two writers, but it had never before been fully studied. When Van Harlingen, in 1882, wrote the article on "Syphilis" for the International Encyclopædia of Surgery, he could find less than twenty-four cases of the affection recorded. It occurs in two varieties. The more common variety affects the subcutaneous tissues and the fibrous structures of the joints, the other arises in the periosteum and the bones. It does not, as a rule, make its appearance until five to fifteen years after the primary lesion.



Syphilitic Dactylitis

It appears to be distinctly rarer in the toes than in the fingers. I have observed two cases of syphilitic dactylitis of the finger in the dispensary of the Episcopal Hospital, one being a manifestation of hereditary syphilis in a child, the other occurring in an adult. In the finger it is nearly always the proximal phalanx that is affected, but in the toe, as is evidenced in the case herewith recorded, the swelling usually extends throughout the whole length of the affected digit. As remarked before, the appearance is characteristic, and even if no syphilitic history could be elicited I think the true cause of the lesions would be readily determined.

OSTEOMA OF THE OUTER SURFACE OF THE ULNA

C. B. CLAPP, M.D.

Surgeon in charge, Wabash Employes' Hospital

MOBERLY, MO.

Patient—J. S. H., aged 28, section laborer, when about 10 years of age noticed a small lump on the outer surface, near the lower end of the right ulna, which has slowly but constantly grown until the present time. He does not remember any traumatism to this part at any time.

Description of Tumor—The tumor itself measures $7\frac{1}{2}$ inches in circumference, its surface is rough and jagged, resembling the cauliflower somewhat in appearance. The radiograph (Fig 1), which was taken by me before the operation, shows clearly the usual shortening of the shaft of the ulna and the drawing away of its articular surface from the wrist joint. It also shows the peculiar curving of the shafts of both the bones of the forearm, compensating, in part, for this development, and also the malposition of the distal extremity of the ulna. Since

¹ Amer Jour Syph and Derm, 1871, vol II, p 1

the operation the distal piece has acquired a more normal position and will doubtless adapt itself more closely to the wrist joint in time and thereby afford material strength.

Remarks—It is interesting to note that this man has always done the heaviest kind of manual labor, using the shovel constantly for days, driving spikes with a heavy sledge, lifting

the lesion in making local treatments. With this simple instrument I have treated many patients who otherwise would have been obliged to undergo general anesthesia.

It consists, as the cut shows, of a straight glass tube with an oval window in the side. The lower end is rounded and punctured by a small hole which allows air dilatation of the rectum. The handle is detachable and to prevent cracking of the glass it should be removed when the instrument is sterilized.

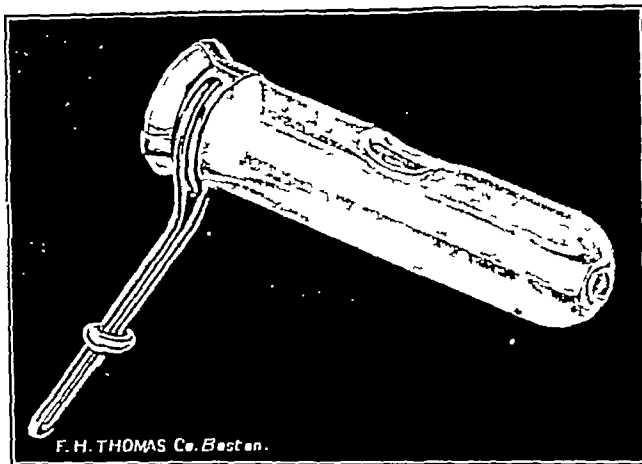
METHOD OF USE

With the patient either on the elbows and knees or in the right semi prone position the distal end is smeared with vaselin and pressed firmly over the anal orifice. Then as the patient strains down the instrument slips easily past the sphincters.

Should there be an excess of vaselin about the window in the instrument it is wiped away with a cotton swab. By gently rotating and partially withdrawing the tube the whole anal circumference can now be thoroughly explored without discomfort to the patient.

ADVANTAGES

The following advantages are claimed for this speculum over



others now in use. The round tube is the most easily introduced when there is spasm of the sphincters, which is nearly always the case in disease in this locality. The edges of the oval window are so smooth that rotating and withdrawing it does not pinch the mucous membrane and thus cause pain—and what is more important, the mucous membrane anterior to the part being examined is firmly supported and thus a good view is obtained.

In the bivalve specula and the conical fenestrated ones with removable blades, the mucous membrane so prolapses into the instrument that a satisfactory examination is often impossible. Besides, their use is painful and they have to be reintroduced several times in order to examine thoroughly the whole of the anal canal.

When necessary for special cases the window may be enlarged, made smaller, or placed at a different level. The one in the cut, however, has proved suitable for nearly every case.

This instrument I now use almost exclusively when a speculum is required for the examination or treatment of the anal canal. And when it is recalled that more than half of the diseases of the rectum are in this locality its field of usefulness is readily appreciated.

Milk in Pulmonary Tuberculosis—When any dyspepsia arises from the use of milk, Burton Fanning advises adding 20 grains (an eggspoonful) of sodium bicarbonate to each tumblerful. The milk may also be given warm, or thickened with some farinaceous food, or it may have a little spirit added. It should not be swallowed in bulk, but should be slowly sipped. With these modifications milk usually agrees, even when drunk at meals with other food. A great deal of milk can be administered in the form of junket or other pudding, to which cream may be added.—*Denver Medical Times*

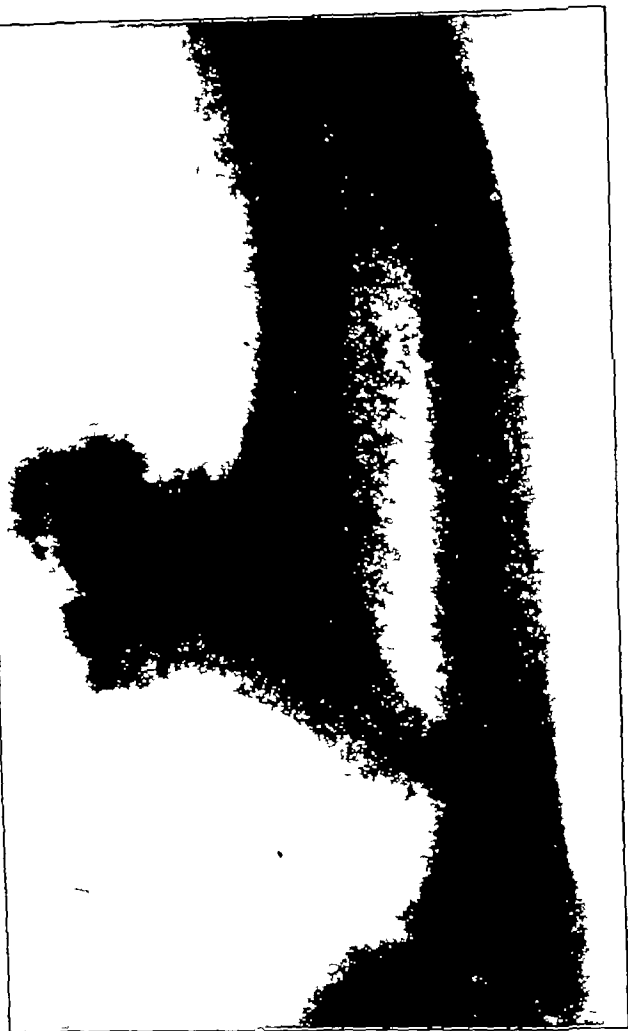


Fig 1—Showing the shortening of ulna and malposition of articular surface.

steel rails, handling ties, and all work usually done by a man on the section, and at no time, either before or since the operation, has he noticed that this wrist or arm tires before the other, or is weaker than the other.

New Instrument

A NEW ANOSCOPE

T CHITTENDEN HILL, M.D.

Surgeon to the Rectal Department of the Boston Dispensary
BOSTON

This new instrument, which I devised for a special case, has proved of such general utility in the treatment of affections of the lower rectum and anal canal that a brief description of it may be of interest.

For examinations and treatment of the rectum proper and pelvic colon the round tubes of Kelley and the later pneumatic modifications of these leave nothing to be desired but for the treatment of ulcerations, abrasions, new growths, etc., of the anal canal the specula in common use have not at all times been satisfactory. A diagnosis can be made by digital examination, but it is often important to have a good view of

ties, Professor Franklin H. Giddings, of the department of sociology of Columbia University, and H. W. Conn, professor of biology in Wesleyan University, who both agree that the influence of environment on the race has been very much overrated, and that natural selection and the elimination of the unfit are undoubtedly the saving factors in present-day human evolution. The consideration of such opinions should open up new lines of thought to physicians who are apt to cling to the idea that racial degeneration is a question of unsuitable environment rather than of the preservation of the unfit to such a degree that degenerative factors are not eliminated, as they would be in the ordinary process of human nature.

THE ETIOLOGY OF HEMOPHILIA

Since hemophilia, superficially, at least seems to depend on some alteration in the coagulability of the blood it is frequently regarded as an example of the hereditary transmission of a chemical peculiarity. The exact cause of this peculiar tendency to prolonged bleeding from insignificant or perhaps imperceptible wounds has been sought vigorously by both histologic and chemical means, but as yet without avail. Various observers have described abnormal thinness, or increased cellularity, or fatty degeneration of the vessel walls, but the findings have been far too inconstant to afford a satisfactory anatomic explanation of all the features of hemophilia. Likewise, increased blood pressure can be ruled out, for although the left heart is frequently enlarged, usually no increased pressure is demonstrable, furthermore, conditions of high blood pressure, such as nephritis do not cause hemophilia. The theory of "hydremic plethora" is also without good foundation.

The most natural place to look for the fundamental fault is in the blood, but speaking strongly against this is the frequent occurrence of "local" hemophilia, e. g., in some hemophiles wounds of the skin may behave as in normal individuals, whereas any injury of the mucous surfaces is followed by pronounced hemophilic bleeding¹ in other cases the hemophilic bleeding is limited to regions above the shoulders, in still another class the bleeding is always from one organ, e. g., the kidneys. Nevertheless a great deal of investigation of the blood has been done chiefly with negative results. There are no characteristic changes in the cellular elements of the blood beyond those common to all secondary anemias except possibly, Sahl's observation of a decrease in the number of white corpuscles, with a relative increase in the number of lymphocytes. No constant alterations in the salts of the blood have been found and the proportion of water, the alkalinity and the osmotic pressure of the serum all seem to be normal. Since bleeding is normally stopped principally by coagulation, a deficiency in fibrin or its antecedents might be expected but most studies on this point have shown a normal

amount of fibrin in the blood of hemophiles, the frequent formation of large tumors of clotted blood at the bleeding points supporting the experimental evidence that the blood contains an abundance of fibrinogen.

As to the rate of clotting, the results obtained by different observers are by no means in accord, which seems to be explained by the recent studies of Sahl,² who has avoided a number of errors made in earlier investigations. He found that in the intervals between the attacks of hemorrhage the rate of the coagulation of the blood is constantly much slower than normal. During an attack of bleeding the coagulation time approaches the normal, indeed, it may be quicker than normal, apparently this is due to a reaction on the part of the organism to the loss of blood. If blood be collected directly from the site of bleeding, the coagulation time is very rapid, because of the accumulation of fibrin ferment from the clot over which the escaping blood flows. Yet, in spite of the normal coagulability of the blood, and the rapid clotting after the blood escapes from the vessel, bleeding continues for long periods before it can be stopped. As there is no general change in the properties of the blood to account for the bleeding, and as local influences seem to be important in hemophilia, Sahl advances the plausible hypothesis that chemical changes in the vessels must be the essential factor in hemophilia. Hemorrhage is ordinarily checked chiefly by the formation of clots that plug up the bleeding vessels at the point of the hemorrhage. The local formation of the clot is believed to be due to liberation of fibrin ferment (or its antecedents) by the injured cells of the vessel wall at the point of the vascular lesion. If the cells of the vessel wall are deficient in these fibrin-forming substances the blood will not clot in the mouths of the vessels, but will first clot when it reaches a place where fibrin-forming substances are furnished by other tissues, or, as is generally the case, when the leucocytes are broken up by exposure to the air or other injurious influences. Under these conditions the blood may clot in large masses, but, as there is no fibrin adhering to the vessel walls at the bleeding openings, blood continues to escape.

Sahl considers, therefore, that the cause of hemophilia lies in hereditary deficiency of fibrin-forming substances (thrombokinase or zymoplastic substances) in the vessel walls, so that when the vessels are injured there is no local production of fibrin such as occurs normally. Local hemophilia may be explained readily as a local deficiency in fibrinoplastic material. In general hemophilia even the leucocytes may exhibit the same defect, in which case clotting of the blood is diminished even outside the tissues. This hypothesis seems to be in excellent agreement with the facts now known, but it yet remains to demonstrate such a lack of fibrin-forming elements in the vessel walls and other tissues of a hemophilic subject. It probably also explains why the marked

¹ Abdrhalden, Ziegler & Belt, 1904 No. 35 p. 217

² Zeitst. f. klin. Med., 1905 vol. 141 p. 264 See also THIS JOURNAL, May page 1817

increase in coagulability of the blood that can be obtained by administration of calcium salts is, as Wright's³ observations show, not sufficient alone to stop hemophilic bleeding, even although the rapidity of clotting is much greater than normal. As Sahlb suggests, whatever means are employed to check such bleeding should aim to secure a stoppage of the mouths of the vessels by the clotting blood, this may be best attained probably by applying the styptics under considerable pressure.

THE RESPONSIBILITY OF THE MEDICAL SCHOOL FOR CONTRACT PRACTICE AND OTHER EVILS

We have often referred to contract practice and its causes and we have included in the latter the overcrowding in the profession, the jealous rivalry and the disorganized condition that permits men to isolate themselves and to minister to the immediate present at the expense of the unthought-of future. Perhaps we have never dwelt with sufficient emphasis on the part which the medical college plays in failing to lay a foundation in the physician's training that will tend to prevent secret division of fees, contract practice, jealous slander and various other unethical practices.

One of the ways in which most, if not all, of our medical schools have failed to do their duty has been in graduating students into professional life without having given them the slightest idea of the economies of medicine. No word of those principles of ethics which should govern the conduct of medical men has been taught them. Medical students have had no instruction on what should be their relations to their fellow-physicians and to the profession in general or to the people whom they are to serve. Thus, ignorant of what they should know, they step into professional life and at once begin to make blunders. Who of us can truthfully say that, during the earlier years of his professional life he did not do many things which were not in accord with that spirit of honor which should have guided him, and this solely because he knew no better? Not only have the colleges failed to teach the student what should be his future attitude toward his professional brethren, what he should do and what he should leave undone but they have also failed to instill into the student's mind that spirit of "Unity, Peace and Concord" which he most needs.

Indeed, so far from teaching this, our schools have too often placed before the student, throughout his entire course, living, breathing examples of "envy, hatred, malice and all uncharitableness." Who of us can not recall the bitter rivalry, the unseemly fights and squabbles between the members of the faculties of his own school and some other, or between those who were members of the faculty and those who would like to have been?

Having been graduated in ignorance, the physician

has begun his lifework in the greatest of all liberal professions, heavily handicapped. The seeds of discontent, of jealousy, of discord, have been sown during his undergraduate years, and they are not healthy seeds to plant in isolated soil. Until very recently, and in large measure even now in many sections of the country, he has found himself a solitary member of an unorganized profession, he has gone his own way and been subject to the evils that accompany a solitary life. His professional neighbors, without knowing him or his ability, have not welcomed him to their ranks. There has been no society of medical men where he might meet his professional brethren and thus counteract the individual peculiarities which develop in all of us. He has been slandered, and, in turn, has quite as unjustly slandered his fellow-practitioners while the people have looked on and their respect for the profession suffered. Whole communities have been disturbed for years, and children have been born, have grown up and gone into the world, carrying a feeling of contempt for the medical profession, simply because a few otherwise good physicians and excellent men could not dwell together in charity. And probably the foundation for most of these lifelong, bitter fights among medical men has been a falsehood.

Much—not all of course—of this could have been avoided had the young physician been warned in time.

THE EXPERIMENTAL PRODUCTION OF ARTERIO SCLEROSIS

The study of disease in the human being is always rendered difficult by the fact that the pathologic investigations, for the most part, must be limited to the terminal stages of the disease. Such studies, while they doubtless advance our knowledge to a large extent, throw little light on a very essential aspect of the subject, the evolution of the disease. In man we must depend for our studies of the early stages of most chronic diseases on the chance finding of early lesions in subjects dead of other conditions. Even here the pathologic conditions may be so various that their inter-relations are difficult of interpretation, and we are finally reduced to the experimental method if we are to follow a given disease, uncomplicated, throughout its course.

Arteriosclerosis is a disease so common and so varied in its effects that it has always been subjected to close study and numerous attempts have been made to produce it experimentally. Up to within three years such attempts have been uniformly unsuccessful. In 1903, however, Josué described lesions in the aorta of rabbits similar to those found in man, and due to the administration of the active principle of the adrenal glands. His report has since been confirmed by various observers, recently by Pearce,¹ and the original observations have been considerably extended. The lesions of experimen-

³ Wright Brit Med Jour, 1894, No 2, p 57

¹ Jour of Exp Med 1906 vol VIII p 74

tal arteriosclerosis in the rabbit, and this seems to be the animal *par excellence* for its experimental production, are remarkably like those which occur in man under natural circumstances. The disease differs in some respects from human arteriosclerosis. It is confined to the aorta, according to Pearce and most observers, though it may attack other vessels, according to Erb. The acuity with which the lesions appear (they are often well marked after two months) would also seem to be different from the usual course of human arteriosclerosis. To the naked eye, the animal and the human disease are practically identical. The vessels of the rabbit show, first of all, an irregular longitudinal streaking of the intima, later irregular, discrete or confluent areas of a pearly gray color, and almost constantly calcified, later still dilatations, even aneurisms, with more marked calcification, appear. It can readily be seen that just such a description also fits the lesions of human arteriosclerosis.

The greatest interest of these experimental arterial lesions lies in the histologic findings. Pearce's work especially shows that the earliest lesions are in the media and affect the muscular tissue and the elastica. The lesions are degenerative in character, partake of the nature of a necrosis, and are followed by the deposition into the necrotic tissue of lime salts. Fracture of the elastic fibers, which is quite commonly seen, occurs least where the deposition of lime salts is greatest, and is seen to the largest extent in connection with aneurismal dilatations where but little calcification has occurred. The proliferative changes in the intima which occur during the later stages of the process seem, according to Pearce, to partake very definitely of the nature of a compensatory process.

The method by which adrenalin acts in producing these changes is still obscure. That the action is due to the direct effect of toxins on the media seems unlikely from its limitation to the aorta. That it is due to the action on the vasa vasorum, as Erb holds, seems doubtful in the presence of changes in the adventitia. The most striking change produced by adrenalin is the increased blood pressure, and some, at least, of the changes observed might be due to this. As Pearce points out, this aspect of the question must be settled by methods other than histologic.

So far as applying the results of these experimental studies to man is concerned, most of the investigators have taken a conservative stand. At present, pathologists are pretty well divided as to the pathogenesis of arteriosclerosis. There are many who hold that the disease is essentially an inflammatory one and that the intimal changes are not secondary to the medial ones, on the other hand, many still support Thoma's view that the first changes are degenerative ones in the media, and that the intimal changes are of a compensatory nature. The experimental work seems to give support to the latter view.

PHYSICIANS AND POLITICS

It has long been regarded as a kind of unwritten law by physicians that they should take no part in politics. Perhaps, however, this is scarcely the correct way in which to describe the situation. Rather might it be said that physicians, as a body, have shown themselves apathetic in regard to politics, preferring to stand aloof from party strife and to look on the whole question as one in which they had slight concern.

This attitude of indifference has been rudely shaken of late years, and the fact is being borne in gradually on medical men that, in order to protect their own interests and the interests of the general public, they must abandon this lethargic position and act both aggressively and defensively. There are many reasons why the physician should not eschew politics, indeed, there are more reasons in favor of the physician playing his part in the political world. The somewhat cynical indifference assumed by the medical profession toward politics has resulted in the passage of many measures in several states inimical to physicians and by no means advantageous to the community at large. Signs are not lacking that a change of front is about to be manifested by medical men, and that in the not far distant future the doctor must be reckoned with as a power in politics. This is as it should be. It is not urged that the physician should inject himself into the hurly-burly of political warfare, but that he should use his influence to forward such measures as would be conducive to the betterment of sanitary conditions and to oppose measures calculated to be detrimental to the public health.

If the medical man wishes, he can exert an immense amount of influence. He is, in a general way, educated, well read, a good judge of human nature, and, above all, is in closer touch with all sections of the community than are the members of any other class. It goes without saying that, as regards matters that come within his particular province, he is entitled to speak with authority. It has also been suggested that by the participation of medical men in politics the tone would be raised. At any rate, municipalities and governments would often do well if they asked for and acted on expert medical opinion ere embarking on many of their wide-reaching schemes. As it is, the fact stares us in the face that the aid given by the government to medical or sanitary measures has been meager in the extreme. The medical man is a negligible quantity in the affairs of the nation or state, and until he has shown that he is an important member of the community politically he will, as before, be treated with contemptuous indifference. The upshot rests with himself to a very large extent.

THE PREVENTION OF BLINDNESS

If it be true, as stated, that 33 per cent of blindness is certainly avoidable, it becomes pertinent to consider whether the profession can not do more, both in the care of eye affections and in the education of the public.

In a small proportion of cases blindness is caused during infancy but in the majority it must be attributed to the more dangerous and especially to the contagious, eye affections concerning which the public is too little informed. There is no disability that is in its way more discouraging to the individual or more costly to the public than blindness and while it is possible to render it less of a public and private burden, very much still remains to be done. The evil is none the less serious because a considerable portion of the burden is borne by private resources instead of public charity, as is the case with insanity. The fact that the blind are not so much a public danger does not render them less deserving of public sympathy or make it less our duty to ease and especially to prevent the occurrence of their infirmity. Much can be done by the promotion of proper legislation as in the state of Massachusetts, and still more by a more careful sense of responsibility and conduct in accordance throughout the medical profession. We are disabled doing much both personally and in the education of the public but the existence of so much preventable blindness means that we could do more.

PHYSICIANS DO NOT APPROVE OF CHLOROFORMING THE HELPLESS

The astonishing allegation has been quoted in a number of newspapers recently that two medical societies had endorsed the proposal to chloroform all persons who had reached the age of sixty. All sensible physicians knew this could not be true of any reputable society and we at once wrote for information. The secretary of one of the societies says it was all the result of a joke on a reporter who accepted as truth the fabric of lies and embroidered on it to a considerable extent in his paper. We hope that the affair has not contributed to the public's distrust of the physician. We had supposed that the unenjoyable notoriety thrust by a dull-brained press on the originator of the chloroforming-the-aged joke would be a solemn warning to all other physicians to avoid the subject. If one insists on joking let both joke and listener be approved by a state board of examiners in humor.

THE POSTOFFICE DEPARTMENT AND MEDICAL LEGISLATION

The influence of the Postoffice Department in regulating, if not actually controlling, the sale of spurious drugs and medicines and appliances for criminal purposes is of the highest importance. It is a source of congratulation that the present Postmaster-General, Mr. Cortelyou, is fully alive to this fact, as is shown by his letter published in the Department of Medical Legislation. The thanks of the medical profession and society in general are due to the Postoffice Department for having suppressed many concerns that have been engaged in this nefarious traffic. It is a matter of sincere regret, however, that the present law does not enable the department to deal summarily with many of these offenders. Congress should so amend existing legislation that it shall be an offense to deposit in the mails matter advertising either remedies, appliances or treatment intended

for fraudulent or criminal purposes and authorizing the confiscation of the same when found in the mails. The assumption of the Postmaster-General that such a law would have a most wholesome moral effect will be ratified by every reader, who will likewise agree in the view that society in general is entitled to precisely this sort of protection.

CANADIAN COURT TO INVESTIGATE A NOSTRUM

An opportunity is now afforded in British Columbia to secure some light on the alleged harmlessness of "Chamberlain's Colic, Cholera and Diarrhea Remedy." We referred last week to the coroner's verdict on the death of an infant said to have been caused by this nostrum. The Vancouver *World* used some strong language in commenting on the case, and that paper is now sued for libel. We are glad to note that the *World* declares its satisfaction over the prospect. Some of these nostrums are being hard pressed by the exposures that are made, and they will, of course, fight back. Whether they will carry the fight actually into the courts remains to be seen, it is easy to commence a suit, and it has the effect of scaring the weak-kneed. But sometimes the courts get to bottom facts and find out the truth which some nostrum vendors are not anxious to have made known.

ONE ILLUSTRATION OF FRATERNITY AND CO OPERATION

An Idaho physician¹ who made application for license to practice was rejected because the results of his examination were not satisfactory and the district judge to whom his appeal was taken reviewed his examination papers raising the grade, but not raising it enough to pass him. He then appealed to the Supreme Court, and while the case was pending, Dr. R. L. Nourse, the president of the Idaho State Medical Society, who was also a member of the State Board of Medical Examiners at the time the application referred to was acted on, commented rather pointedly, in his annual address, on the actions and words of this district judge. Besides quoting freely from the judge's opinion as handed down, Dr. Nourse said "Think of it! A judge, however learned he may be in matters of law, sitting as superior to a board of six medical men on matters pertaining to medicine, gravely scrutinizing the markings given by a medical board to a candidate for a license to practice medicine to see if he had been rated correctly. It would be intensely funny if it were not, in fact, so serious a matter." Further, commenting on the remarks of the judge concerning the subject of pathology, Dr. Nourse said "It will, no doubt, be news to you that pathology is a subject that only specialists (he does not say what specialists) are expected to be posted on. Although every *bona fide* medical school in existence teaches pathology, and every state examining board must examine on it, yet this learned judge sweeps it aside as an unfair test." For these remarks Dr. Nourse was summoned before the judge, who fined him \$300.00.

¹ See Idaho news, this issue

and costs for contempt of court. An appeal was taken to the Supreme Court, but it refused to set aside the action of the district judge and the fine was paid. Dr. Nourse's public criticism of the judge while the case was yet unfinished may have been technically wrong, but it was worth the fine to have the opportunity of expressing the frank opinion. The best part of the whole matter, however, is that the members of the Idaho State Medical Society showed their fraternal feelings in a practical manner by voluntarily taking such action that Dr. Nourse will be nearly, if not fully, repaid. They have sent to the secretary \$240.00, and more is still coming in. It is this spirit, which is the natural result of organization, that is so encouraging for the future, for it is a spirit that is gradually coming to prevail among the members of the profession in every state.

CONTAMINATED FOOD

The work of securing pure food involves more than making laws against adulteration. Food which is not adulterated may yet be contaminated in its manufacture and preparation for market. In a recent article Mary Sherman,¹ of the National Consumers' League, portrays some conditions that almost make one afraid to eat. The article is illustrated and shows in what vile and disgusting quarters macaroni, ice cream, candy and other products are prepared. For the most part, these supplies are for consumption among the poorer classes, and the personal danger is not very apparent to the average person outside of the slums, but this can not be said of a New York nut factory, in which nuts are shelled for candy factories, bakeries and retail groceries. The firm makes a specialty of "health food" preparations, including nut marmalade, nut butter and nuts packed in glass jars. These products are sold in the best shops and are purchased by well-to-do people. The workers are described as being, without exception, dirty. Their hands were filthy. One girl, who separated the unbroken shelled nuts with her fingers, had ulcers on the backs of her hands. During the rush season the workers, who are largely Italians on poor wages, take work home. Some of these homes are said to be indescribably filthy and crowded. In one case, nuts were picked over by an Italian and his children. The father and one boy were tuberculous. The father had tuberculous joints, and during the time that he was engaged in this work he had had a knee-cap and part of the arm bones removed. The nut meats picked over in such houses by such persons lie on their tables over night and, on being returned to the factory, are not washed or cleaned, but are packed into jars to be sold at 25 cents each, with advertisements calling attention to the purity and cleanliness of the goods. These specific instances are simply cited to indicate the need of health inspection of the tenements, the pure-food agitation involves an immense amount of work and demands the sympathy of people in every walk of life, for self-protection as well as for the protection of those who have to buy cheap foods.

¹ *Charities and the Commons* February 10

THE DIAGNOSIS OF INCIPIENT TUBERCULOSIS

There is no subject which so imperatively requires the attention of the general practitioner as the diagnosis of incipient tuberculosis. It is generally admitted to-day that, if the symptomatology be recognized early enough, the sufferer in most cases can be restored to health. Yet the pathetic fact remains that the disease is generally not recognized until it has passed the incipient stage. The committee on nomenclature of the National Association for the Study and Prevention of Tuberculosis has provided this definition of incipency: "Slight initial lesion in the form of infiltration limited to the apex or to a small part of one lobe, no tuberculous complications, slight or no constitutional symptoms (particularly including gastric or intestinal disturbances or rapid loss of weight), slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours, especially after rest, expectoration usually small in amount or absent, tubercle bacilli may be present or absent." Since most patients first consult the family physician, he ought to be a specialist in tuberculosis, and if a practitioner who assumes the important rôle of family physician does not feel proficient he should realize his responsibility and take steps to render himself thoroughly familiar with the symptomatology, diagnosis and treatment of this disease. In few other diseases will good and timely action bear so much beneficial fruit. In no other disease will the mournful results of unskillfulness and conscienceless neglect be visited so disastrously on the physician. It is not intended to set forth here the many factors to be considered. We would but emphasize the fact that conclusions must be reached only after the consideration of many details.¹ One among these would mean nothing, several taken together would be suggestive, a number combined would be conclusive. There is no telling to what a slight hint may lead. The faculty of judgment, of basing correct conclusions after having grasped essential features, the discriminative temperament, the scent for diagnosis, must here be called into play, and when it exists the physician can and will, without doubt, diagnose most cases of tuberculosis while the disease is in its incipency.

Medical News

IDAHO

New Hospitals.—Articles have been filed for the incorporation of the Pocatello General Hospital with a capitalization of \$25,000, of which \$5,000 has already been subscribed. Coeur d'Alene Hospital has been reorganized and incorporated by Drs. B. J. Scallon and W. W. Wood of Coeur d'Alene, and Drs. L. L. McGee and C. W. Craik, Wallace. The Idaho Falls Hospital Association has been incorporated with a capital stock of \$20,000.

State Board of Examiners Has Quasi Judicial Powers.—A very important decision was recently handed down by the Supreme Court of Idaho bearing on the judicial powers of the State Board of Medical Examiners. Dr. Raaf took the examination for license to practice at the regular meeting of the

¹ Report of the Committee on Early Diagnosis of the National Association for the Study and Prevention of Tuberculosis. *THE JOURNAL A. M. A.*, May 27 and June 3, 1905, pages 1706 and 1804. See also "The Early Diagnosis of Incipient Tuberculosis," a circular issued by the Illinois State Board of Health, which can be obtained, we believe by addressing Dr. James A. Egan, Springfield, Ill.

board in October, 1901, but failed securing a general average of only about 56. Appeal was taken by him to the District Court, on a writ of review and the judge was asked to re rate the examination papers which the judge did, and as a result raised the doctors grade from 56+ to 69. And further, the judge in his findings says "But I find pathology to be a subject that only specialists are expected to be conversant with, and I therefore set aside the subject of pathology entirely and on all the other branches I find the plaintiff entitled to 73 1/2. This, however, was not enough to pass the plaintiff (the law requires 75) and the judge refused to order the board to grant him a license to practice. From this decision the plaintiff appealed to the Supreme Court and recently this court handed down a decision wherein the board was sustained in its contentions that the district judge exceeded his jurisdiction in presuming to review and remark the examination papers of applicant for license and that appeal from the decision of the board of examiners as to an applicant's fitness to practice medicine could only be taken on points of law. In other words the board of medical examiners is given quasi-judicial powers and so long as its actions are within and according to law, its decision as to an applicant's qualifications to practice medicine is final and without appeal.

ILLINOIS

Illegal Practitioner Fined—Stephen Picard was found guilty February 16 of advertising himself as a licensed physician, and was fined \$100 and costs.

State Charities Board Election—The State Board of Charities met in the office of the secretary, at Springfield February 14 and elected Dr Frank Billings president.

Personal—Dr Francis J. North, Taylorville was recently operated on for appendicitis in St. Louis.—Dr Ezra Weiss, Peoria is critically ill with cerebral hemorrhage.

Dedicate New Building—The Illinois Western Hospital for the Insane, Watertown dedicated its new amusement hall and two cottages for the treatment of insane consumptives, February 12.

New Hospital for Consumptives—The building committee of the Cook County Board has approved the plan for the proposed emergency hospital for consumptives on the County Hospital ground to cost \$15,000.

Civil Service Examination for Internes—The Civil Service Commission announced the following appointments for members of the examining board to conduct the examinations for internes for Cook County Hospital, March 6 to 10: Drs Terrence Henrotin, Charles S. Bacon, J. B. Colwell, Malcolm L. Harris, Charles F. Kahille, John D. Robertson and Robert B. Preble.

Dr McCormack's Visit—Dr H. C. Mitchell, president of the Illinois State Medical Society, announces that Dr J. N. McCormack will devote the entire month of April to Illinois. He will begin his itinerary in the ninth judicial council district, which is located in the extreme southern end of the state, and will take the districts according to their geographical arrangement going from south to north. In the work of medical organization, says Dr Mitchell, Dr McCormack has no superior in the United States. The work he is doing is of the highest order and includes not only the medical profession, but the laity as well. There is a great demand for this kind of work throughout the entire country, because it brings the profession into closer and more harmonious relations, and teaches the physician his duty to his patient, and the patient his duty to his physician. Dr McCormack invites the general public to all these meetings, and wants all classes of thinking people, such as lawyers, doctors, ministers, farmers, laborers, women's clubs, temperance organizations, county officials, congressmen, legislators and United States senators. Dr McCormack says that often after he has delivered his lecture the physicians in attendance will say that it is too bad that the general public could not have been invited, as it would have been just as instructive to them. Dr Mitchell, therefore, hopes that this mistake will not be made this time, as Dr McCormack will only visit Illinois once, and, if the general public is not invited, it will be too late to rectify the mistake.

Chicago

A Low Death Rate—For the week ended February 17, 527 deaths were reported, equivalent to an annual death rate of 13.41 per 1,000, which compares favorably with the rate of 14.34 for the previous week and with 16.50 for the corresponding week of 1905. Pneumonia led death causes with 80, fol-

lowed by consumption with 72, heart diseases with 49, violence with 37, Bright's disease with 29, acute intestinal diseases with 29, nervous diseases with 26, and cancer with 23.

Practical Disinfection—The State Board of Health has issued a circular detailing the experimental work in formaldehyde disinfection done in its laboratory. As a result the board now feels justified in recommending formaldehyde for use in disinfection after contagious diseases, if employed by the methods described, with potassium permanganate and with 40 per cent aqueous solution of formaldehyde, and believes that in properly sealed rooms positive and reliable disinfections can be secured by the use of 3 1/2 ounces of potassium permanganate and one pint of formaldehyde solution to each 1,000 cubic feet of air space.

Dinner to Dr Doherty—Seventy-five members of the Chicago Medical Society attended a dinner in honor of Dr David J. Doherty, February 17, at which Dr Charles S. Bacon presided as toastmaster, and addresses were made by Drs Senn, Evans and Corwin, eulogizing the thorough, able and conservative work of Dr Doherty as a trustee and as a member of the society, and wishing him success in his trip to the Philippine Islands. Dr Doherty responded, giving details of his plans of completing the dictionary of the Philippine dialects and stating that he expected to spend a year or two in sociologic and ethnologic studies before returning. A beautifully bound book, containing an address signed by all those present, was presented to Dr Doherty.

MARYLAND

To Prepare for Centenary—A meeting of the alumni of the University of Maryland was held February 21 to prepare for the celebration in May, 1907, of the one hundredth anniversary of the medical department.

Personal—Dr Louis A. Griffith, Upper Marlboro has been appointed a member of the State Board of Health.—Dr Robert S. Tyson, Frederick, has been appointed physician to Mountvue Hospital, Frederick County.—Dr William B. Morrison, Hagerstown, has been appointed physician to Bellevue Asylum.

For State Sanatorium—A bill has been introduced into the legislature appropriating \$25,000 for a state sanatorium for consumptives in the Blue Ridge Mountains. This sum will be devoted principally to the purchase of land, and the institution will be operated in conjunction with the hospital for consumptives in the suburbs of Baltimore.

Hospital Report—The seventh annual report of the Cambridge Hospital shows that during 1905 777 patients were treated, with 24 deaths. The receipts and expenditures were each about \$12,550, leaving a small balance in bank. A special gift of \$800 was received for the purchase of a set of sterilizers and through private subscriptions an x-ray department, a bacteriologic laboratory and an operating room were equipped.

Lectures on Milk—The State Board of Health inaugurated a course of lectures on milk February 20, to continue every Tuesday evening until May 1. The lectures are delivered in McCoy's Hall, Johns Hopkins University, and include the economic, dietetic and hygienic relations of milk, and will mark the progress of an exhaustive investigation covering the production, transportation, reservation, distribution, domestic care, dietetic uses, adulteration, sophistication, epidemiology and governmental control of milk and milk products of the country. The lectures will be followed by an exhibition under the auspices of the State Board of Health, the State Live Stock Sanitary Board, the Agricultural College of Experiment Station, and the Association for the Prevention and Relief of Tuberculosis.

Baltimore

Health Report—The health department estimates that there are at present more than 10,000 cases of influenza. During the week ended February 17, 49 deaths from pneumonia and 4 cases of smallpox were reported.

Personal—Dr John Turner was presented with a solid silver wine tray by a number of physicians in New York, who have united for original anatomic research.—Dr George Wegefarth has gone to St. Augustine, Fla.

The Sale of Patent Medicines—Dr G. Milton Linthicum addressed the Arundel Club, February 15, in behalf of the bill now before the legislature regulating the sale of patent medicines, and on February 17 a public meeting was held at Johns Hopkins University in the interest of the same bill, over which Dr W. S. Thayer presided.

Hospital Report—Johns Hopkins Hospital reports that for the year ended January 31 there were treated 3,027 whites and 1,197 colored patients, of these 3,350 were discharged as well or improved 130 as unimproved, 292 were not treated, 134 were transferred to other departments, and 243 died. In the dispensary 71,435 were treated.

MASSACHUSETTS

New Hospital Dedicated.—St. Anne's Hospital, Fall River, was dedicated with elaborate ceremonies February 4 by the Rt. Rev. Bishop Stang. At present the institution can accommodate 87 patients.

Testimonial to Bowditch.—Over 400 patients who have been or are being treated at the Rutland Sanatorium presented recently to Dr. Vincent Y. Bowditch, who has been visiting physician there, a beautifully bound and illuminated testimonial in token of their regard for him.

Legacies.—By the will of Jasper P. Pope, Beverly, \$1,000 is bequeathed to the Beverly Hospital. By the will of Mrs. Helen G. Coburn the Children's Hospital, Boston, receives \$50,000 and the Coburn fund of the Massachusetts General Hospital \$75,000. Harvard College will receive a legacy of \$50,000 for its medical department under the will of the late George S. Hyde, to be paid on the death of Elkin P. Hyde and Mrs. Annie M. Sargent, brother and sister of the testator.

The Association Meeting.—The meetings of the American Medical Association June 5 to 8, in Boston come the week before the regular annual meetings of the Massachusetts Medical Society. The committee of arrangements for the latter has, therefore, decided to omit the scientific papers usually read before the medical and surgical sections on Tuesday afternoon. The time will be devoted to hospital visitation. All the other sessions of the state society will be held as usual, including the Shattuck lecture, on Tuesday evening.

Personal.—Dr. William P. Lawler, Lowell, has been made a member of the local board of health. Drs. Daniel S. Harkins and Francis X. Crawford have succeeded Dr. Alfred A. Wheeler as physicians for the Boston street department. Dr. Marvin T. Bissell, New York City, has been elected superintendent of the North Adams Hospital. Dr. Joseph N. Boyer, Jr., has been appointed city physician of Springfield, vice Dr. Simon J. Russell. Dr. Joseph C. Pothier has been appointed medical inspector, Dr. Frank E. Stetson chairman, Dr. Manuel V. Sviridov quarantine physician and Dr. Charles F. Connor, bacteriologist of the new Bedford board of health. Dr. Carl H. Fidan has been chosen as chairman of the Lawrence board of health. Dr. George A. Fagan has been appointed chairman of the North Adams board of health.

Change in Harvard Faculty.—The newly issued catalogue of Harvard Medical School shows 141 names in the list of faculty and instructors, one to every two students. A good many changes are to be noted. Those who have died or resigned are Edward S. Woods, professor of chemistry, Francis H. Davenport, assistant professor of gynecology, H. H. A. Beach, Charles F. Withington, instructor in medicine, James O. Jordan, assistant in materia medica, James G. Mumford, instructor in surgery, and Drs. Samuel S. Maxwell, William A. Brooks, Jr., Hibbert W. Hill, George B. Magrath, William A. Emerson, David H. Walker, Clarence W. Keene, Robert L. pointes or promotions are Drs. Louis Nelson, John W. Bartol, Robert B. Grenough, Ralph S. Lillie, Alexander Quackenbush, Eugene A. Crockett, Harvey P. Towle, Frederick S. Burns, Elliott P. Joslin, Harry C. Low, Arthur M. Worthington, George L. Baker, Francis W. Palfrey, Walter A. Leconte, E. deW. Wales, Henry A. Christian, Carl L. Alsberg, Horace Bismarck, Walter R. Brinkerhoff, Frederick E. Lord, Lawrence J. Henderson, S. Burt Wolbach, George H. Wright, New Austin, teaching fellows are Dr. Fred T. Murphy, Dr. William I. Holt and Dr. Fred W. Thwing.

Boston.

McLeod Guilty.—At a meeting of the board of trial of the Massachusetts Medical Society held January 31, Dr. Percy D. McLeod was found guilty of unprofessional conduct. The penalty for this offense is expulsion from the society.

Staff Changes.—The following changes have been made in the visiting staff of the Boston City Hospital. Dr. Abner Post has resigned as senior visiting surgeon. Dr. Frank W. Draper as medicolegal pathologist, and Dr. Edward T. Twitchell as physician to the Convalescents' Home. Dr. Herbert L. Burrell has been promoted to senior visiting surgeon, Dr. George H. Monks to junior visiting surgeon, Dr. Fred B.

Lund becomes first assistant visiting surgeon, Dr. Frederick J. Cotton, second assistant visiting surgeon, and Dr. David Cheever, third assistant visiting surgeon. Dr. William H. Roby, Jr., has been appointed medical registrar vice Dr. John N. Coolidge, resigned.

MICHIGAN

New Hospital.—The new Sault Ste. Marie Hospital was formally opened February 1.

Fire in Hospital.—The interior of the Michigan Children's Home Hospital, St. Joseph, was damaged by fire and water February 2 to the extent of \$2,500.

Change of Name.—Dr. Charles B. Nancrede, Ann Arbor, has had a petition granted by the judge of the Probate Court to change his name to Charles Beylard Guerard De Nancrede.

Medicine Sample Distributor Convicted.—In the case of the Detroit Board of Health against Andrew McIntyre, charged with distributing samples of medicine from house to house in violation of the ordinance, the defendant pleaded guilty and threw himself on the mercy of the court and was released on suspended sentence.

Birth Registration.—The total number of births reported to the Department of State during January was 4,032, equivalent to an annual birth rate of 18.4 per 1,000. The registration for the first month of the operation of the new law requiring immediate registration of births has been satisfactory, although several districts made no report for the month. The number reported for the month, however, exceeds that for January, 1905, under the old law, by 830.

Academy of Medicine Election.—At the annual meeting of the Academy of Medicine of Southwestern Michigan, Kalamazoo, January 23, the following officers were elected: Dr. Alvin H. Rockwell, Kalamazoo, president; Drs. Norris A. Williams, Bangor, and Orrin F. Burroughs, Plainwell, vice presidents; Dr. Walter B. Blavker, Kalamazoo, secretary and treasurer; Dr. Edward H. Van Deusen, Kalamazoo, librarian; and Drs. George D. Carnes, South Haven, and Orton H. Clark, Kalamazoo, directors.

January Mortality.—The total number of deaths during January was 2,968, equivalent to an annual death rate of 13.6 per 1,000, as compared with 12.4 for December. Of the deaths recorded 544 were infants under one year of age and 943 of individuals aged 65 years and over. Among the important causes of death were pneumonia, 288, tuberculosis, 233, accidents and violence, 150, cancer, 135, diphtheria, 63, typhoid fever, 46, diarrheal and diseases of infants 44, influenza 39, whooping cough, 27, measles, 19, and scarlet fever, 18.

Personal.—Dr. A. S. Kitchen, North Escanaba, has been appointed local surgeon for the Chicago, Milwaukee and St. Paul Railway. Drs. John Van der Laan and Frank W. Garber, Muskegon, have resigned as trustees of the Hackley Hospital in that city. Dr. Roger S. Morris, Ann Arbor, instructor in internal medicine and demonstrator of clinical medicine in the medical department of the university, has accepted an appointment in the Johns Hopkins Hospital, Baltimore. Dr. and Mrs. R. Adlington Newman, Detroit, sailed for the Mediterranean January 26.

MINNESOTA.

New Hospitals.—The George B. Wright Memorial Hospital, Fergus Falls, was opened to the public January 1. It has accommodation for about twenty-five patients. The German Lutherans of Mankato have decided to erect a hospital, to cost \$50,000, and with accommodation at present for forty patients. A site has been donated for the Norwegian Hospital, Minneapolis. The buildings are expected to cost about \$100,000. The St. Paul Commercial Club has decided to erect a public hospital in that city to cost \$14,000. Bethesda Hospital is to be erected in Crookston, as the \$12,000 fund required has been subscribed.

Personal.—Dr. Justus Ohage and family, Minneapolis, sailed for Naples from New York, February 24. Dr. Andrew J. Gilkinson, Osakis, has been appointed a member of the State Board of Health. Dr. Julian A. Du Bois, Sank Center, has been appointed a member of the board of managers of the School for Deaf and Blind, Faribault. Dr. Frank Murphy, Caledonia, has been appointed physician of Houston County. Dr. Otto C. Quitmire, Parker's Prairie, has been appointed local surgeon for the "Soo" System. Dr. Charles W. More, Eveleth, has been reappointed a member of the State Board of Health. Dr. Edmund W. Barlev, Sleepy Eye, has been ap

pointed brigade surgeon, Minnesota National Guard, with rank of major.—Dr J V Johnson has been appointed health commissioner of Lacleth.—Dr and Mrs Samuel D Flagg, St Paul have gone to the Mediterranean.—Dr Eduard Boeckman St Paul has gone abroad.—Dr Charles Freeman St Paul has been elected secretary and treasurer of the Anglo American Club of Berlin.—Dr Christopher J Woolway St Paul has been appointed chief physician for the Delune Mine in Keweenaw County.

NEW JERSEY

Hospital Changes Name—Bishop O'Connor and the trustees of the new Roman Catholic hospital Orange, have decided to change its name from the Hospital of the Immaculate Conception to St Mary's Hospital.

Recovers Damages—The suit of Dr Reginald S Bennett, Ashbury Park to recover \$20,000 damages from Adolph Busch, St Louis, whose automobile ran down the physician and his wife and child in June last was decided February 7, and a verdict of \$12,000 was given the plaintiff.

Personal—When Dr Charles Brewer completed his duties as house physician in the New Jersey state prison the officers of the prison presented a silver tea service to him. Dr Brewer was house surgeon for fourteen years. He is succeeded by Dr S L Stinger formerly president of the board of prison inspectors.

Funds for Hospitals—William F Evans, the artist, has donated \$20,000 to Mount Sinai Hospital, Montclair, for the erection of a home for nurses. Miss Margaret S Jarvis has also made a donation of \$5,000 to the institution.—Mrs Everett Colby has sent \$5,000 to the New Jersey Orthopedic Hospital and Dispensary, Orange.

Contagious Disease in Camden—The secretary of the board of health reported the number of cases of contagious diseases for the past month to be 71. Of these reported only two were of typhoid fever. This demonstrates the value of Camden's water supply, there having been practically no cases of typhoid fever since the installation of the artesian wells in this city.

Personal—Dr J Walter Stiles, Jr, assistant physician at the Essex County Hospital for the Insane, Newark, was operated on for appendicitis January 31.—Dr William T Ridge way has been appointed city physician of Atlantic City, vice Dr Leon H Armstrong.—Dr Charles C Phillips, Deerfield, who has been a practitioner for fifty two years in that place, expects to move to Pitman Grove.—Dr and Mrs C D Martinetti, Orange, returned from Europe by the *Princess Irene* January 25.—Dr Joseph B Shaw, Trenton, was thrown from his automobile and seriously injured, January 25.

NEW YORK

Appeal for Stony Wold—In order that this institution may claim the conditional gift of \$17,500, \$1,920 must be secured by March 1. The directors have been successful in raising \$17,575 and are making a great effort to get the balance required.

Work on State Hospitals—The State Lunacy Commission has awarded contracts for work to be done on the state hospitals at Rochester, Poughkeepsie and Willard. At Rochester the north building of the hospital group is to be remodelled. At the Hudson River State Hospital a refrigerating apparatus is to be installed at a cost of \$7,395. At Willard a contract was let for the construction of a new cold storage building to cost \$10,131, and the installation of refrigerating machinery at a cost of \$7,163.

State Board of Charities—Some of the recommendations for legislation contained in the recent report of this body are: That the appropriations to the state institutions be subdivided in the appropriation bill so that fixed sums shall be appropriated for food supply and clothing apart from the appropriations for salaries and other fixed charges, that the Craig Colony for Epileptics be enlarged as rapidly as possible, that it may be able to take epileptics of all classes from almshouses and other places where they can not receive proper care.

Against Consumption Colony—A bill has been introduced to prevent New York City from establishing a consumptive colony in Richmond for which appropriations have already been made. The bill seeks to make an amendment to the New York City charter giving local boards of improvement the power to recommend the establishment of penal institutions and hospitals within their districts, and further making provision that no such institution or hospital shall be established in any borough, if such local board, by vote of three fourths of its members, disapproves.

State Health Report—Dr Eugene Porter reports that during the past year 1,554 deaths from typhoid fever occurred in the state, and that it was no exaggeration to say that almost every one was caused by infected water. The efforts of the health departments to prevent pollution of public waters should be supplemented by legislation which will give it further control of potable waters of the state by providing that all plans for public water supplies be approved by the state commissioner of health, and also to secure inspection of proposed and existing sewer systems. Not only was it important that all sewer systems in the different towns and municipalities in the state be investigated, comparison made and examinations conducted, but it was equally important that every sewer system, sewage disposal plant, manufacturing establishment, every municipality and summer resort should be thoroughly examined at least once a year and a competent report made in every case. The registration of births was far from satisfactory. The most incomplete registration was shown in Troy and Albany, where a birth rate of but 101 per 1,000 as against a resident death rate of 167 was recorded. In Troy the birth rate was 118 and the death rate 191. It was doubtful whether one half of the births occurring in these cities were reported. The registration of marriages was also unsatisfactory. For this he recommended that a marriage license be required from the county clerk of the county in which the contracting parties resided. The following cities reported fewer births than deaths: Albany, Troy, Binghamton, Cohoes, Corning, Fulton, Hudson, Ithaca, Middletown, Newburg, Oswego, Rensselaer, Rome and Watervliet. The vital statistics for the year showed 172,259 births, 137,816 deaths and 78,261 marriages as against 165,014 births, 141,363 deaths and 74,677 marriages in 1904. Based on the recent census population the birth rate is 21.3 per 1,000 and the death rate 17.

New York City

Personal—Dr John N Drury of Bellevue Hospital has gone to his home in Lowell, Mass. to undergo treatment for blood poisoning. It is feared that he will lose his arm.

Harvey Society Lecture—The tenth lecture in the Harvey Society course will be delivered at the New York Academy of Medicine by Prof Charles S Minot February 24, on "The Nature and Cause of Old Age."

Low Death Rate—At the annual meeting of the trustees of the Hebrew Infant Asylum it was reported that the death rate of the institution for the past year was 1 per cent. It was thought that this was the lowest death rate in any children's institution in the United States.

Poor Food for Steerage Passengers—The captain of the steamship *Einy* of the Austro American Line has been arrested charged with providing unwholesome food for infants in the steerage. Several other captains of ships in the immigrant trade have also been arrested for failing to obey the statutes relating to accommodations for steerage passengers.

Contagious Diseases—There were reported to the sanitary bureau for the week ended February 10, 1,390 cases of measles with 40 deaths, 432 cases of diphtheria with 49 deaths, 349 cases of tuberculosis with 161 deaths, 215 cases of scarlet fever with 16 deaths, 34 cases of typhoid fever with 7 deaths, 20 cases of cerebrospinal meningitis with 17 deaths, and 151 cases of varicella—a total of 2,591 cases with 299 deaths.

Out-Door Pneumonia Treatment—Preparations are being made to remodel additional parts of the roof of the Presbyterian Hospital for the open air treatment of pneumonia. This treatment has proved so successful that it is hoped the increased facilities will be available before the end of the winter. At present only children can be treated this way, as adults can not conveniently be carried on the roof and consequently receive treatment in small rooms with windows open.

Wood Alcohol in Communion Wine—Health Commissioner Darlington told the alderman's committee on salaries and officers that the adulteration of the food and drink sold in this city had become so general that it had spread to communion wines, some of which are alcoholic. He had the contents of a bottle labelled "communion wine" analyzed and found wood alcohol, hard cider and anilin coloring matter. Dr Darlington has planned a crusade against adulterated foods and drinks on a small scale. To make a complete job he thinks would cost the city \$500,000 a year. He has asked for power to appoint a supervising chemist at \$1,800 a year. When samples are found containing substances injurious to health he proposes to prosecute the makers and sellers. The committee decided to report favorably on Dr Darlington's application.

NORTH CAROLINA

Personal.—Dr George A Coggeshall, Henderson, is critically ill with pneumonia.—Dr Isaac W Faison, Charlotte, who has been seriously ill, is reported to be improving.—The vacancy in the office of coroner of Buncombe County, caused by the recent death of Coroner Dr W E Hemphill of Arden, has been filled by the election of Dr E R Morris of Asheville.

To Keep Water Pure.—Superior Court Judge Ferguson has made permanent the injunction recently obtained by the city of Durham against the Eno cotton mills near that city, restraining them from emptying their sewage into Eno Creek. The company is further ordered to provide a suitable system of sewage disposal at once, the method to be subject to the court's order, to the approval of the State Board of Health. The result is complete victory for the city of Durham and her efficient health officer, Dr T A Mann.

Test Compulsory Vaccination.—The right of the state to enforce vaccination of school children is again to be tested in the courts of this state in a case now being developed in Union County. The county superintendent of health, Dr H D Stewart Monroe went to the school house to vaccinate Mr H G Criffin and his pupils, as there had been cases of smallpox in the vicinity and a general vaccination had been ordered. Principal Morgan declined to be vaccinated himself or to allow the children to be, alleging that their parents had forbid its being done. At the trial the teacher held that as the parents had forbidden the vaccination had he permitted its being done he would have been personally and legally liable to them for damages while the health officer contended that he should not have resisted the order of the health board. The final decision (which was reserved until March 10) rests on the rules adopted by the county board of health the code of North Carolina saying it is a misdemeanor to violate the laws as passed by a county board of health or to obstruct its operation, but it seems the code has been the subject of revision and a copy of the revised code which went into effect only a few days ago was not in court hence the reserving of the decision.

OHIO

Hospital Closed.—The Marion City and County Hospital was closed February 6.

Gifts for Hospital.—At the annual meeting of the trustees of Lakeside Hospital Cleveland, gifts were announced aggregating \$300 000.

Pay Ward Reopened.—The board of public service has decided to reopen the pay ward of the Cincinnati Hospital, holding however the right to close it again if the hospital should become so overcrowded as to necessitate its use for public cases.

Fires.—The residence of Dr Leonard E Warren, Marietta was damaged to the extent of about \$300 February 1 by an explosion of natural gas.—Longview Hospital was damaged to the extent of \$1,000 by a fire which started in the superintendent's departments February 10.

Cuspidors in Street Cars.—The State Board of Health has adopted a rule requiring companies owning and operating street and electric cars not confined wholly within one municipal locality to provide cuspidors and declaring it dangerous to public health to spit on the wall or floors of any such cars.

Distillers Object.—As was to be expected, considerable opposition has developed as a result of Health Officer Allen's recommendation to the Cincinnati health board to prohibit the sale of distillery slop to dairymen. If Dr Allen's recommendation is adopted it will mean a loss of thousands of dollars a year to the breweries and distilleries, which, of course, is nothing to the owners of this otherwise unmarketable article, they claiming probably that it is an extremely useful article of diet for the milch cow.

Personal.—Dr W A Dicker Toledo, who was recently injured in a street car accident, is convalescent.—Dr Goodhue Kineon Cincinnati, has been appointed assistant at the Ohio Hospital for Epileptics, Gallipolis.—Dr Oscar W Bonner has been reappointed health officer of Delaware.—Dr Orlando T Maynard, Elvira, sailed for England February 6.—Dr Frank C Reed and family, Akron, left for a Mediterranean trip February 6.—Dr Harry D Belt, Kenton, has been reappointed physician of Hardin County.—Dr James C Shurera has been appointed surgeon of the B & O System at Newark.—Dr Charles A L Reed Cincinnati has been chosen president of the Smoke Abatement League.—Dr James A Leech, Columbus has been appointed physician at the workhouse.—Dr Paul D Hale, Dayton, is convalescent after a severe attack of pneumonia.

Non-Political Management of Hospital.—At the regular meeting of the Cincinnati Academy of Medicine, January 29, a resolution was adopted providing for a committee of five who were to devise some means by which it would be possible to take the department of health and the City Hospital out of the hands of the political party in power, in other words, to form a non partisan board for the governing of these two important departments of the city service. As the law now stands these departments come under the management of the governing power of the city and can not be taken from them except by act of legislature. Theoretically, everyone is prepared to admit that it would be for the good of the city and for the best interests of the physicians if these two branches of city government were in charge of non partisan boards, but whether the idea can be carried out at the present time is problematical.

PENNSYLVANIA.

Smallpox at Bryn Athyn.—Three cases of smallpox were reported in one home in Bryn Athyn during the past week. Dr Fred Johnson, chief medical inspector of the state health board, has been detailed by the health commissioner, Dr Dixon, to take charge of the situation. The village may be placed under state quarantine on account of the refusal of many of its residents to submit to vaccination.

Philadelphia

Bequests.—The will of the late Araminta P Banks bequeaths \$25 000 each to the Home for Consumption, the Sunday Breakfast Association, and the Midnight Mission.

Health Report.—The deaths reported from all causes during the week numbered 612. This is an increase of 28 over last week, and an increase of 13 over the corresponding week of last year. The principal causes of death were Typhoid fever, 37, measles, 14, diphtheria, 10, meningitis, 4, consumption, 81, cancer, 18, apoplexy, 14, heart disease 55, acute respiratory diseases, 120, enteritis, 28, cirrhosis of liver, 10, Bright's disease, 45, old age, 14, accidents, 14, and marasmus, 4. There were 544 cases of contagious disease reported, with 59 deaths, as compared with 530 cases and 44 deaths reported in the preceding week. There were 429 new cases of typhoid fever, 725 of measles, 160 of pneumonia, 152 of tuberculosis, 78 of diphtheria, 51 of chickenpox, 37 of scarlet fever, and 4 of meningitis.

WISCONSIN

New Building for Hospital.—St Mary's Hospital, Milwaukee, is to be torn down and a new building erected on its site to cost about \$200,000.

Medicine Peddler Found Guilty.—On February 6 S R King, a medicine peddler of Beloit, was found guilty of practicing medicine without a license, and fined \$50 and costs.

District Society Meeting.—At the meeting of the Eleventh District Medical Society, held recently in Ironwood Dr Matthew S Hosmer, Ashland, was made president, and Dr Charles D Conkey, Superior, secretary-treasurer.

Personal.—Dr George D Ladd, Milwaukee, was stricken with cerebral hemorrhage while performing an operation at Milwaukee Hospital, January 20.—Dr Thomas W Nuzum, Brodhead, has gone to Europe.—Dr Patrick H McGovern, Milwaukee, has succeeded Dr John R Currens, Two Rivers, as a member of the State Board of Medical Examiners.—Dr Henry J Stalker, Kenosha, was taken seriously ill at a banquet in Racine, February 6.—Dr Lawrence Mayer, Hudson, has been appointed a member of the State Board of Health.

Fox River Society Meeting.—The Fox River Valley Medical Society held its annual meeting and banquet at Green Bay, Wis, January 16. The following officers were elected for the ensuing year. President, Dr Robert E Minahan, Green Bay, vice presidents, Drs Walter R Hicks, Menominee, Mich, and Henry W Abraham, Appleton, Wis, secretary and treasurer, Dr Chester M Echols, Appleton Wis, and censor, Dr William E Fairfield, Green Bay, Wis. The secretary was instructed to thank *Collier's Weekly* in behalf of the society for its vigorous campaign against injurious nostrums.

Anniversary Meeting.—The Milwaukee Medical Society celebrated its twentieth anniversary by a banquet at the University Club, January 12. The toastmaster was Dr Horace Manchester Brown. The regular toasts were responded to by Drs Samuel W French, W H Washburn, G J Kaumheimer, A T Holbrook and T L Harrington. The society has increased from eight to 150 members in twenty years, has a library, reading room, pathologic museum and assembly room on the third floor of the Goldsmith building, owns a library of 5,000 volumes and subscribes to 100 periodicals annually. Meetings are held bimonthly and are well attended.

When an aroused public sentiment shall make out public men ashamed to lend themselves to this charlatanism, and shall enforce on the profession of journalism those standards of decency in the field of medical advertising which apply to other advertisers the Proprietary Association of America will face a crisis more perilous than any threatened legislation. For printer's ink is the very life blood of the noxious trade. Take from the nostrum vendors the means by which they influence the millions and there will pass to the limbo of pricked bubbles a fraud whose flagrant and impudence are of minor import compared to the cold hearted greed with which it grinds out its profits from the sufferings of duped and eternally hopeful ignorance."

Mr. Adams also points out that as a convincing argument many nostrums guarantee not a cure as they would have the public believe, but a reimbursement if the medicine is unsatisfactory. Other concerns send their remedies free, on trial and still others go so far as to offer a reward for proof that the stuff will not perform the wonders advertised. Mr. Adams says that if every subscriber to a newspaper who is interested in keeping his home free from contamination would protest and keep on protesting against advertising foulness of this nature the medical advertisers would soon be restricted to the same limits of decency which other classes of merchandise except as a matter of course, for the average newspaper publisher is sensitive to criticism from his readers. Further more a perpetrator of unclean advertising can afford to go to court on the ground of breach of contract by the newspaper publisher because his case is indefensible.

No Longer Members of the Proprietary Association

The Hotel's Medical Mill Company, Racine, Wis., asks us to announce that the firm is no longer a member of the Proprietary Association of America.

Price of Phenacetin (Acetphenetidinum) to Be Reduced

The patent on phenacetin expires on March 27 and after that date it will be sold at 3 cents an ounce lots. If bought on purchase under the pharmacopeic name—acetphenetidinum—the price will be \$1.15 a pound or 7 cents an ounce.

Ayer's Cherry Pectoral

Boston, Mass., Feb. 12, 1906

To the Editor—I have been interested in the formula of "Ayer's Cherry Pectoral" thus far submitted. Here is another from the note book of my father, Dr. J. L. Stevens, who many years ago practiced in Eastern Maine and copied by him from Bruthwaite's Retrospect in 1848.

R Morph acet
Tr sanguinalis
Vin tart antim
Min Ipecac. an
Syr prunl Alr.

gr 4
5ij
3ij
3ij

G. B. STEVENS, M.D.

Duluth, Minn., Feb. 15, 1906

To the Editor—In Olsson's "Secret Nostrums and Lists of Medicines," published in 1891 in Chicago, is given the same formula of Ayer's Cherry Pectoral as given in THE JOURNAL, February 10, except that the earlier formula, taken from the *Pacific Medical and Surgical Journal*, contains gr ij (instead of gr iiss) of morphin acetate in the three ounce mixture—double the amount of acetate morphin given out by the Ayer people.

HOMER COTTINS, M.D.

Leucoplasmia—Jacopere (*Archives Gén de Méd*, 1905), does not believe that a non-syphilitic leucoplasmia exists. He thinks that two conditions are usually requisite for its appearance, first, the existence of persistent or recurring mucous patches, this is the primary cause, second, chronic inflammation at the locations of the ulcerations, due chiefly to irritation by the use of tobacco, alcohol, etc., and, secondarily to this, of the constant muscular movements of the parts. He does not say that this absolutely explains all cases. There may be possibly a leucoplasmia occurring without preceding mucous patches, but if such a condition exists it must account for only a small proportion of cases.

Medical Legislation

The Postoffice Attitude Toward Nostrums

The chairman of the National Legislative Committee addressed the heads of the various departments of the national government requesting information relative to proposed medical legislation. These communications were sent in November under the impression that the meeting of the National Legislative Council would be held in December. Events, however, showed that it would be better to defer that conference until Jan. 9, 10 and 11, 1906, at which date it was held. All of the departments manifested their appreciation of the interest thus shown by the American Medical Association. One of the most appreciative letters and one dealing with exceedingly important subjects was from the postmaster general, as follows:

OFFICE OF THE POSTMASTER GENERAL
WASHINGTON, D. C., Jan. 12, 1906

Dr. Charles A. L. Reed, Chairman, Cincinnati

My Dear Sir—Apologies are due you for the delay in answering your communication of November 4, stating that a meeting of the Legislative Committee of the American Medical Association is to be held at Washington in December, and expressing the wish that you be advised of any legislation on medical subjects which may be desired by the Postoffice Department. This delay has been due to the desire to give full consideration to the question of the department's attitude regarding proposed legislation.

The Postoffice Department will recommend to Congress legislation authorizing the exclusion from the mails of all publications and circular matter promiscuously advertising or promoting the sale to the general public of remedies or appliances for the treatment of private or sexual diseases, or proffering to the public personal services in the treatment of such diseases, and making it an offense to deposit such matter in the mails, expressly providing, however, that circular matter advertising such remedies or appliances may be mailed to physicians and legitimate dealers, under cover of envelopes. This department has suppressed many concerns advertising and selling through the mails such remedies or appliances, on evidence that purchases of them were being induced by means of fraudulent representations. In other cases in which conclusive evidence of fraud could not be obtained, the advertising matter has been held to be indecent and its revision required. Other concerns carrying on similar enterprises, however, have so far succeeded in evading the law, and it seems impossible to reach and to suppress them without additional authority from Congress. It is believed that a statute making it an offense to deposit in the mails matter advertising any such remedy, appliance, or treatment, and authorizing its confiscation when found therein, would have a most wholesome moral effect, as well as afford needed protection to credulous and unfortunate persons.

Section 3893 of the Revised Statutes, as amended by the act of Sept. 26, 1888 (1 Supp. R. S. 621), provides for the punishment by fine and imprisonment of any person depositing or causing to be deposited in the mails any "article or thing designed or intended for the prevention of conception or procuring of abortion," or any "article or thing intended or adapted for any indecent or immoral use," or any "written or printed card, letter, circular, book, pamphlet, advertisement or notice of any kind giving information, directly or indirectly, where or how, or of whom or by what means" any of the articles or things enumerated may be obtained or made. The opinion has been expressed by the United States district attorneys that the sending through the mails of information indicating where abortions will be performed or can be obtained, whether in the form of a circular or newspaper advertisement, is not forbidden by this statute, and they have accordingly declined to institute criminal proceedings in such cases. These are frequently arising, and it is desirable that this defect in the statute be remedied by amendment.

It is believed that with these exceptions the existing laws afford as complete authority as the Post Office

Department can effectively exercise in the direction of purifying the mails and safeguarding the public from fraud and other imposition practiced in connection with the sale of medicines, appliances, etc

This department will be pleased to receive and consider any suggestions offered by the American Medical Association in the matter of legislation along these general lines Very truly, yours,

GEORGE B. CORTELYOU

All of the foregoing letter following the first and preceding the last paragraph has been reduced to the form of a memorandum to which the Committee on Legislation has appended the following

Resolved, Dr the American Medical Association that the recommendations of the Postmaster General contained in the foregoing memorandum be and are hereby, approved and that their enactment into a law is hereby respectfully urged on the Congress

Physicians and Legislation

In several states bills are now before the legislatures relating to the control of the "patent medicine" and food adulteration evils. The relation of physicians to the health problems of the community gives them vital interest in these bills, and, instead of contenting themselves with talking about the bills at medical societies and passing resolutions which are never heard of outside the medical profession, physicians should appear before the committees to which the bills are referred. More than any other persons, physicians have positive evidence to prove the fraudulent or dangerous character of most patent medicines. In commenting on this subject the *Maryland Medical Journal* says

"Last winter a bill to regulate the 'patent medicine' business was introduced in the legislature of Massachusetts. The advocates of the measure argued that its provisions were approved by a great weight of medical opinion, but this argument was disposed of easily and completely. The opposition said 'There is no evidence whatever that this bill is supported by the medical profession. If physicians really favored the measure, they would do as other citizens do—appear before the committee and urge its passage. No physicians have appeared before the committee, and for us the proof is conclusive that the few lay people, who have appeared, represent the full strength of the proposition, and that the people of Massachusetts including the physicians, do not want any such legislation.'"

Correspondence

Interstate Reciprocity

DETROIT, Feb 15, 1906

To the Editor—I have read with more than ordinary interest the article entitled "Interstate Reciprocity," by Dr George W. Webster, president of the Illinois State Board of Health and secretary of the Council on Medical Education of the American Medical Association, published in *THE JOURNAL* of February 10. Dr Webster enumerates several of the fundamental facts entering into the question of interstate reciprocity. To nearly all of such facts quoted I can very heartily subscribe, namely,

First—Medical education and the license and control of the practice of medicine is purely a state function

Second—The state medical board is the only body authorized by the state to determine the conditions and qualifications under which a medical license is granted

Third—Medical laws are enacted for the benefit of the people rather than for the benefit or profit of the medical profession

Fourth—Each state has constitutionally established standards of its own, and such standards in consequence lack uniformity

Fifth—Each of the 157 medical colleges practically sets its own standard (This is only true in a degree)

Sixth—Various associations of medical colleges and medical societies have established standards, but such standards are ineffective in law from want of authority of both associations and societies

I have substituted medical societies for "medical boards" in Dr Webster's text, as the latter could not have been meant and, therefore, is clearly an error, but Dr Webster, in his enumeration of facts, has omitted at least two sets of facts which are not only fundamental ones, but which are most important from the standpoint of a practical solution of the difficulties met with in the administration of the several state reciprocity clauses, namely

Seventh—The great majority of states recognize, and, therefore, have legalized, three or more distinct schools of practice, no one school of which in law is less or greater than the other, and that in all questions involving standards, reciprocity and administration no one school, however prepondering its membership, has the authority to settle such a vital question as reciprocity without the co-operation and support of all the schools of practice recognized in the several states

Eighth—No proper or effective medical law has been enacted in any state except by and with the co-operation of the several schools of practice legalized in such states

Dr Webster, having omitted in his statement of facts a large percentage of the most material facts connected with and necessary to the success of interstate reciprocity, it naturally follows that his suggestions for a solution of the difficulties met with in the question of interstate indorsement of licenses, based entirely on his defective presentation of facts, must, therefore, be impractical and subject to criticism and deserved opposition, and can not possibly result in any good to the cause which he seemingly advocates

His statement of facts under "Second," viz., that the state medical board is the only body authorized by the state to determine the condition and qualifications under which a medical license is granted, and his proposed remedy, namely, "Equal requirements, uniformity in entrance requirements, uniformity in length and character of the medical course, uniformity in the scope and character of the examinations, should be done through the organized profession, as embodied in the American Medical Association and by its Council on Medical Education," has only to be quoted to show absolutely the impracticability of his proposition. His proposed remedy is not only in direct conflict with his statement of facts under "Second," but also in direct conflict with the remaining divisions of facts, including

"First" to "Eighth," inclusive. It is possible for Dr Webster, or, for that matter, any one else, or any association of persons except a state legislature, to confer on the Council of Medical Education of the American Medical Association, of which he is secretary, the authority which he truly states is solely vested in state medical boards?

The proper and equitable administration of the reciprocity clauses of the several states is a matter solely within the authority of the state medical boards interested. These medical boards are capable of fulfilling the duties and responsibilities with which they are charged by the state, and do not require unauthorized persons or associations to measure their authority or to perform their legal duties. The boards, however, are appreciative of intelligent assistance from associations in carrying out their difficult duties, provided there is no usurpation of the authority of the state responsible for their status

I would very diffidently inform Dr Webster, as he seemingly has forgotten the matter, that some four years ago a confederation of state medical boards was founded on the basis of the fundamental facts as subscribed by himself. This confederation with a membership at present of nearly 50 per cent of all the states, has succeeded in establishing practical medical reciprocity in some twenty one of the better states, including Dr Webster's own state, Illinois. It has also adopted an itemized standard of preliminary and medical education, which standard has also been adopted and is being enforced by the Association of American Medical Colleges. It has also, at the solicitation of Dr Webster, adopted a "scope and character of examination." In the brief period of four years it has already more than fulfilled all the several divisions of basis for reciprocity advocated by Dr Webster. No confederation or association ever founded in this or any other country has accomplished such a quality and quantity of practical work in so short a period, and while Dr Webster seemingly

has overlooked the existence and deeds of the American Confederation of Reciprocating Examining and Licensing Medical Boards, a lesser authority, perhaps, the Association of American Medical Colleges, gives it due praise and credit.

It may be of interest to the profession to know that this Association of American Medical Colleges and the American Confederation are working together harmoniously and practically along similar lines, having in view the unification of the standards of preliminary and medical education. I will prophesy that at the next meeting of the Association of American Medical Colleges to be held at Pittsburg March 10, 1906, its membership will be astounded at the amount of practical work accomplished since its last meeting and also at the quality of such work.

I would suggest to Dr. Webster and to his committee the virtue of co-operation with the above association in which much practical good along the lines of the committee's legitimate objects could be accomplished, as opposed to his entering a field entirely without the range of the committee's power and status.

B. D. HARRISON,
Secretary Michigan State Board of Registration in Medicine

Johns Hopkins Course Not to be Lengthened

BALTIMORE Feb 13 1906

To the Editor—In your last issue I find a statement that I should be glad to have you correct. The statement is this:

"The authorities of the Johns Hopkins University are considering the question of lengthening the course in the collegiate department from three to four years and that in the medical school from four to five years."

A committee is working on the problem of the college course, but that committee will report I do not know. There is absolutely no foundation for the statement that the authorities of this university are considering the question of lengthening the course in the medical school from four to five years.

IRA RAYSON, President

Prophylaxis of Venereal Diseases

SEATTLE WASH Feb 11 1906

To the Editor—As chairman of the committee of venereal prophylaxis of the Washington State Medical Association I desire to appeal to your readers to aid this committee in securing the names and addresses of physicians who would forward notice of any legislative action state or municipal, or action taken by any society, corporation, or individual that would bear on this subject.

The object sought is to classify and to redistribute such literature in a condensed form and thus lead to a more uniform and concentrated action.

At the same time we wish to compile a list of the physicians who desire to receive and to exchange literature, abstracts, papers or reprints bearing on this subject and later, if possible, to establish a bureau of inquiry to which references may be made by any of those desiring knowledge on this subject.

Therefore, we should be very pleased to receive the names and addresses of any physicians who would like to take part in the work of advancing this branch of preventive medicine. Such a list would not be given publicly.

G. S. PETERKIN, M. D.

Prostitution

LOS ANGELES, CAL., Feb 17, 1906

To the Editor—Articles on such subjects as that discussed by Dr. Howard A. Kelly in THE JOURNAL, February 10, usually provoke prolific discussion. Medical men are generally aware of the futility of regulation. Such movements are usually promoted for the graft, for which they afford an unequalled opportunity.

Dr. Kelly's suggested remedy is very discouraging, in view of the fact that this evil has attained its present magnitude in a nation of Puritan origin, in which human belief in divine intervention is widely prevalent. Dr. Kelly's deserved reputa-

tion as a surgeon is dependent on his knowledge of pure surgical science, divested of all dogmatic tradition. Religion is a large factor in the prevention of evil, publicity and public opprobrium is a still greater deterrent, but the Moses who will lead us out of the sexual wilderness must take his cue from Nature. Nature's method (and she will ultimately triumph) is to subdue sexual sins against society by causing sterility and death of the sinner. This is a slow process, but might be materially hastened by our co-operation.

When will mankind cease to overvalue the life of criminals, and to extend to them the privilege of reproducing their kind? The greatest obstacle to the accomplishment of these ends is dogma.

FRANK GORDON

Psychopathic Manifestations of Non-Insane Psychoneuroses

NEW YORK, Feb 16, 1906

To the Editor—In a letter published in THE JOURNAL, Dec 16, 1895, I said that the term "psychosomatasthenia," coined and introduced by Dr. John Puntton, belonged to what I am in the habit of calling "Lexicon Greek." I also said that phrenosomatitis might express the same meaning, but that I would not dare to offer it for adoption before consulting Greek friends regarding its acceptability. I wrote to my esteemed friend Dr. B. Leonardos, the director of the Museum of Inscriptions in Athens, who is a physician and a philologist, and received the following information: "The word phrenosomatitis does not seem to me appropriate. Psychosomatasthenia is to be rejected. I believe that the disease can not be named with one word, and that even two words which will correspond exactly with the meaning can not easily be found."

A. ROSE, M.D.

A. W. Orriss Is Wanted

ORIOLE, MD, Feb 12, 1906

To the Editor—Any one having any information which will lead to the location of a man calling himself A. W. Orriss, M.D. will confer a favor on the members of the profession in Somerset County, Maryland by communicating with the undersigned. This man represents himself to be the proprietor of a medical book store and calls on physicians offering to exchange new editions of medical works for the old editions in the physician's library. He exacts a payment from the physician "to cover freight charges and as an evidence of good faith," so he says and departs, and this is the last any one sees of him. He operated in Somerset county to a very profitable advantage to himself and any information which would lead to his arrest would be greatly appreciated.

RALPH L. HOYT,

Secretary Somerset County Medical Society

Marriages

EUGENE A. STURM, M.D. to Miss Mae Salb, both of Jasper, Ind., February 12

H. J. H. HOFVE, M.D., to Miss Pearl Brown, both of Des Moines, Iowa, February 2

WILLIAM L. DUNN, M.D., to Mrs. Gussie Bergman, both of Oakland, Cal., February 8

ROBERT C. CHAMBERLAIN, M.D., to Miss Aleta McCall, both of Tiffin, Ohio, February 15

WILLIAM E. LUTER, M.D., to Miss Eleanor Maury, both of San Antonio, Texas, February 6

HENRY LOUIS HAMMOND, M.D. Daville, Conn., to Miss Cora Ward of Niles, Mich., February 6

BENJAMIN VAN DORN HEDGES, M.D., Plainfield, N. J., to Miss Adele Cutts Williams of Chicago

JOSEPH HAMILTON, M.D., Fruitvale, Cal., to Miss Jessie Aiken of Alameda, Cal., February 2

BENJAMIN F. LEHMAN, M.D., Home City, Ohio, to Miss Edith Savler of Cincinnati, February 20

ALBERT W. SLAUGHTER, M.D., Paris, Ill., to Miss Mary Golden of Urbana, Ill., February 10

STUART Z PEOPLES M D to Miss Helen Marie Anderson, both of Petaluma, Cal, February 4

WILLIAM KEITH MITTENDORF, M.D., to Miss Marie Alvina Borchers, both of New York, February 15

JOSEPH SPENCER DE JARNETTE, M.D., to Chestney Hopkins, M.D., both of Staunton, Va, February 14

WLADISLAW A. KUFLEWSKI, M.D., Chicago, to Miss Angelina R Cwiklinski of Buffalo, N Y, February 21

WILLIAM C PETERS, M.D., to Miss Adah Bryant, both of Bangor, Maine, at Concord, Mass, February 1

EBER D MCKINLEY, M.D., Atlanta, Ind., to Miss Effie L Howard of Athens, Ohio, at Indianapolis, February 7

RAYMOND DEAN TOMPKINS, M.D., Jasper, Fla, to Miss Eliza Beth Wisling Massey of Philadelphia, February 21

MAJOR FREDERICK P REYNOLDS M.D U S Army, to Miss Hortense Cecilia Child of Los Angeles, Cal, February 21

JERIEL WESTON CHAMBERLIN, M.D., St Paul Minn, to Mrs Jane Huntington Yale of Minneapolis, Minn, February 15

JOHN P REDMOND, M.D., Dysart, Iowa, to Miss Freda C Schley of Iowa City, Iowa, at Cedar Rapids, Iowa, February 7

Deaths

Newell E Landon, M.D College of Physicians and Surgeons in the City of New York, 1876, a member of the American Medical Association, New York State Medical Association, Central New York Medical Association, Wayne County Medical Association, and New York & New England Railway Surgeons' Association, surgeon for the New York Central, West Shore and Pennsylvania Railways, consulting physician to the State Custodial Asylum for Feeble minded Women, three times president of the village of Newark, N Y, and one of the most prominent physicians of Wayne County, died at his home in Newark, February 7, from cerebral hemorrhage, after an illness of two months, aged 62

John Slade Ely, M.D College of Physicians and Surgeons in the City of New York, 1886, assistant in pathology in his alma mater, professor of pathology in the Women's Medical College and later pathologist at the Bellevue Hospital, professor of theory and practice of medicine, Yale University Medical Department New Haven and one of the most brilliant members of that faculty in 1896 president of the New York Pathological Society died at his home in New Haven February 7 from concussion of the brain, the result of an accident two days before, when he was thrown from his horse, sustaining a fracture of the skull, aged 45

Francis Noel Burke, M.D Medical College of Ohio Cincinnati 1856 a surgeon in the Army during the Civil War and at its close chief surgeon of the Department of the Gulf instrumental in the organization of the Philips County (Ark.) Medical Association and also of the Arkansas Medical Society for many years president of the local board of examiners of pensions Helena died at the residence of his brother in Jacksonville, Ala January 27 from cerebral hemorrhage, after an illness of two years, aged 77

John C Spray, M.D Chicago Medical College, 1873 of Chicago from 1878 to 1889 medical superintendent of the Cook County Hospital for the Insane Dunning, an alienist of national repute and one of the earliest advocates of the idea that amusement should not be overlooked in the treatment of the insane died at the People's Hospital, Chicago, February 20, from pneumonia, after a short illness, aged 60

Thomas G Wright, M.D Albany (N Y) Medical College, 1896 a surgeon in the New York National Guard assigned to the Second Regiment Company D, died at his home in Troy, N Y from cerebral hemorrhage after a long illness, aged 32 He was a member of the Rensselaer County Medical Society and of the Medical Society of Troy and Vicinity

Harry M Nickerson, M.D Medical School of Maine at Bowdoin College Brunswick, 1889, a member of the American Medical Association, for two years city physician of Portland and for two years surgeon of the Maine Naval Reserve, died in the Maine Insane Hospital Augusta, February 2, aged 41

Oscar Wiley Woods, M.D University of Virginia Medical Department Charlottesville, 1898 assistant surgeon U S Army,

who saw service in Cuba during the Spanish American War and afterward served three years in the Philippine Islands, died at the home of his brother in Roanoke, Va, from tuberculosis, February 10, after a long illness, aged 35

Robert S Kennedy, M.D Jefferson Medical College, Philadelphia, 1866, of New Sheffield, Pa, for nearly thirty years editor of the *Beaver County Star*, died at the home of his sister in Spring Garden, Pa, February 8, from cerebral hemorrhage, aged 64

Thomas B Hunt, M.D University of Louisville Medical Department, 1864, assistant surgeon in the Fifty fourth Kentucky Mounted Volunteer Infantry during the Civil War, died at his home in Warsaw, Ill, Nov 16, 1905, from rheumatic endocarditis, after an illness of four days, aged 75

James E. Miller, M.D Missouri Medical College, St. Louis, 1881, died recently at his home in Louisiana, Mo, and was buried February 1 The physicians of Louisiana at a meeting February 2 unanimously adopted a resolution setting forth their respect and esteem for their deceased brother

Francis Griffin, M.D Rush Medical College, Chicago, 1869, a veteran of the Civil War, for many years treasurer for the local school district, died at his home in Mapleton, Iowa, February 6 from heart disease, after an illness of two years, aged 59

George Janeway Howell, M.D the University and Bellevue Hospital Medical College, New York City, 1901, a member of the Perth Amboy (N J) Board of Health, died at his home in that city, February 3, from pneumonia, aged 25

Daniel M MacMartin, M.D College of Physicians and Surgeons in the City of New York, 1877, a specialist in diseases of the eye, ear, nose and throat, died at his home in Spokane, Wash, from valvular heart disease, aged 52

Noble W Mountain, M.D State University of Iowa College of Medicine, Iowa City, 1873, a member of the Medical Society of the State of California, died recently at his home in Placerville, Cal, and was buried February 4

Joseph Foulke, M.D Department of Medicine of the University of Pennsylvania, Philadelphia, 1854, of Philadelphia, died at the home of his daughter in Milwaukee, February 10, after an illness of two weeks, aged 79

Ogden Backus, M.D Department of Medicine of the University of Pennsylvania, Philadelphia, 1883, of Rochester, N Y, died at the City Hospital, Rochester, from postoperative pneumonia, February 10, aged about 50

William M Shoemaker, M.D Department of Medicine of the University of Pennsylvania, Philadelphia, died at his home in Georgetown, Washington D C, February 8, after an illness of more than a year, aged 83

Florence De Hart, M.D Women's Medical College of the New York Infirmary, New York City, 1893, resident physician of the State Home for Girls, Trenton, N J, died suddenly in that city, February 12, from intestinal disease

E F Darby, M.D Hospital College of Medicine, Louisville, Ky, 1884, formerly a practitioner of Columbia, S C, died at his home in Lynchburg, S C, February 9, after a short illness

John Findlay Warren, M.D McGill University Medical Department, Montreal, 1896, of Leeds, N D, died at a hospital in Fargo, February 10, from hemorrhage of the lungs, aged 37

Harry Y Graham, M.D Cincinnati College of Medicine and Surgery, died at his home in Winton Place, Cincinnati, February 10, from dropsy, after a prolonged illness

Culvin Foree Violette, M.D University of Louisville Medical Department, 1843 died at his home near Napoleon, Ky, January 10, from senile debility, aged 86

Reuben B Mayes, M.D Memphis (Tenn) Hospital Medical College, 1886 died at his home in Myrtle, Miss, February 4, from pneumonia, after a short illness

Samuel C Latham, M.D College of Physicians and Surgeons of Keokuk, Iowa 1870, died at his home in Enfield, Ill, after a long illness, January 28, aged 72

James G Conner, M.D Rush Medical College, Chicago 1867 health officer of Ionia, Mich, died suddenly at his office in that city, and was buried February 11

J E Mann, M.D Hahnemann Medical College and Hospital Chicago, 1884, of Louisville, Ky, died in Liberal, Kan, February 5, after a long illness

William A Hahn, M.D College of Physicians and Surgeons, Baltimore, 1882 died suddenly at his home in Baltimore, February 14, aged 49

Robert C Pearson, MD New York University, New York City 1860 assistant surgeon of the Fifty eighth North Carolina Infantry, C S A, died at his home in Morganton, N C, January 28, aged 68

William Wakefield, MD University of Louisville Medical Department, 1859, died at his home in Humboldt, Kan, January 30 aged 83

F M Attlebury, MD Missouri Medical College, St Louis, 1896 died at his home in Needmore Mo, January 28, from pneumonia

Deaths Abroad

A Filippi, MD, professor of medical jurisprudence at Rome, and author of popular manuals on the subject died at Rome, December 30 aged 69

D Chiara, MD, professor of obstetrics and gynecology at Florence from 1883 to 1897, died at Turin December 8, after ten years of illness, aged 68

J V Wichmann, MD, professor of pediatrics at Copenhagen, died recently. His name is familiar to readers of Scandinavian medical literature to which he was a frequent contributor

I Pasquini, MD, president of the Italian Obstetrical Society and director of the gynecologic clinic at Rome, died at Rome January 5 aged 81. He was professor of obstetrics for thirty five years and a pioneer in gynecology in Italy

J Cnopf, MD, died at Nuremberg recently, aged 81. He was a true spirit in professional matters, a popular pediatrician and a frequent contributor to periodical literature to the very last. His youthful vigor at his advanced age was frequently remarked

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U S Army ending Feb 17, 1906

Major John Van I surgeon general relieved from further duty at Fort Leavenworth Kan and on expiration of leave of absence to proceed to Omaha and report to the commanding general Department of the Missouri for duty as chief surgeon of that Department

Major Geo I surgeon Munson, I J and Hutton Paul C assistant surgeons appointed members of a board of officers to meet at the General Hospital Fort Bayard N M March 12 for the examination of such officers of the medical department as may be ordered before it to determine their fitness for advancement

Larned Chas N assistant surgeon ordered to report on March 12 1906 to Major Bushnell surgeon president examining board, General Hospital Fort Bayard, N M, for examination to determine his fitness for advancement

Leynolds Charles K Hutton Paul C, Dale Frederick A Roberts William M and Larr Charles W, assistant surgeons are advanced from the grade of first lieutenant to that of captain, with rank from Feb 11 1906

Hallard H M surgeon sick leave of absence extended 30 days Woodson R S surgeon ordered to proceed from Fort McDowell Cal to Presidio of San Francisco to accompany detachment of First Battalion 14th Infantry to Fort Slocum N Y On completion of this duty Major Woodson will return to his proper station

Stephenson William surgeon, granted 60 days' leave of absence Millikin John D dental surgeon arrived at Fort Leavenworth Kans for duty

Wertenbaker Chas I contract surgeon, returned to Madison Barracks N Y, from leave of absence

Leck, Luke B, contract surgeon, returned to Fort Andrews, Mass from leave of absence

Shellenbaker, James I, contract surgeon relieved from duty at Fort Sam Houston, Texas, and ordered to Fort Ringgold Texas, for duty

Macy Fred S, contract surgeon, arrived at Fort Adams, R I, for duty

Iber Albert H, and Dickenson Clarence F contract surgeons, left San Francisco on transport Meade for Philippine service

Davis Oscar I, contract surgeon relieved from duty at Jefferson Barracks Mo and ordered to duty at Fort Des Moines Iowa

Purnell Julius M, contract surgeon, arrived at Fort McDowell Cal for duty

Richardson William H contract surgeon, returned to Fort Sheridan Ill from leave of absence

McCallum Francis M, contract surgeon, granted leave of absence for one month

Dougherty James C contract surgeon relieved from duty at Fort Slocum, N Y and ordered to Fort Jay, N Y to accompany 8th Infantry thence to Philippine service

Navy Changes

Changes in the Medical Corps, U S Navy for the week ending Feb 17 1906

Marsteller F H surgeon, detached from the Columbia and ordered home to wait orders

Page, T I, surgeon, detached from the Franklin and ordered to the Columbia

Stone, E P surgeon, detached from the Naval Academy and ordered to the Rhode Island, February 19

Kerr, D B, surgeon, detached from the Boston and ordered home to wait orders

Bell, W H, surgeon, ordered to the Nevada, February 24

Cool, F C, surgeon, detached from the Nevada and ordered to the Naval Academy

Richardson, R R, P A surgeon, detached from the Naval Hospital Mare Island, Cal, and ordered to the Boston

Porter I J, asst surgeon detached from the Naval Hospital New York N Y, and ordered to the Rhode Island, February 19

Bogan, F M, P A surgeon, detached from the Naval Hospital, Yokohama, Japan, and ordered home to wait orders

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended February 14

Irwin Fairfax, surgeon, detailed as member of Revenue Cutter Service Retiring Board, to meet in Philadelphia, Pa February 15

Onkley, J H P A surgeon, granted leave of absence for one month from March 1

Cumming II S P A surgeon, relieved from duty at San Francisco Quarantine Station and directed to proceed to Yokohama Japan for duty in office of American Consulate, relieving P A Surgeon Dunlop Moore

Robertson H McG, assistant surgeon, detailed as member of Revenue Cutter Service Retiring Board to meet in Philadelphia Pa February 15

Ballev C A acting asst surgeon, granted thirty days' leave of absence from February 1

Pullard T T, acting asst surgeon, granted leave of absence for thirty days from February 13

Health Reports

The following cases of smallpox yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine Hospital Service during the week ended February 16, 1906

SMALLPOX—UNITED STATES

California San Francisco, Jan 27 Feb 3 21 cases, 2 deaths
District of Columbia Washington, Feb 3 10 1 death
Florida Jacksonville Feb 3 10, 2 cases, 1 death
Cynthiana 2 cases
Idaho 1 case
Georgia Augusta Feb 6-12, 5 cases
Indiana Allen County, Dec. 1 31, 1 death
Kentucky Covington, Feb 3 10 1 case
Louisiana New Orleans, Feb 3 10, 4 cases
Maryland Baltimore, Feb 3 10, 6 cases
Missouri St Louis Feb 3 10, 6 cases
Ohio Cincinnati, Feb 2 9, 7 cases
South Carolina Georgetown Feb 15, 1 case (Imported)
Tennessee Memphis, Jan 24 Feb 7 5 cases, 1 death
Wisconsin Appleton Feb 3 10, 1 case, La Crosse 1 case

SMALLPOX—FOREIGN

Brazil Pernambuco, Dec. 15 31, 39 deaths
New Brunswick, Kings County Feb 4, present
Queens County, present
Canada Toronto, Jan 27 Feb 3, 1 case
China Shanghai Dec. 23 30 1 death
France Paris, Jan 27 Feb 2, 13 cases, 2 deaths
Gibraltar Jan 1 Feb 4, 5 cases
Greece Athens, Jan 8 15, 1 death
India Bombay Jan 9 16, 2 deaths, Calcutta, Dec. 30 Jan 6 61 deaths, Karachi, Jan 7 14, 4 cases, 4 deaths, Madras, Jan 6 12 19 deaths
Rangoon, Dec. 30 Jan 6, 10 deaths
Italy General, Jan 18 25, 66 deaths
Japan Formosa, Dec. 1 31 3 cases
Russia Moscow, Dec. 23 Jan 13 5 cases, 3 deaths
Odessa Jan 13 27, 38 cases, 4 deaths, St Petersburg Dec 30 Jan 20 19 cases 7 deaths
Spain Barcelona, Jan 21 31, 7 deaths

YELLOW FEVER—FOREIGN

Cuba Habana Feb 11, 1 case
Honduras El Paraiso, Jan 19 1 death
Mexico Merida Jan 28 Feb 3, 2 cases, 2 deaths
Veracruz Jan 21 27, 2 cases 2 deaths
Nicaragua Managua, Dec. 23 30, 1 death

CHOLERA—FOREIGN

India Calcutta Dec 30 Jan 6 72 deaths, Madras, Jan 6 12, 1 death
Rangoon, Dec 30 Jan 6, 3 deaths
Russia Government of Lomza Jan 4 14, 6 cases, 2 deaths
Government of Ploek, Dec 18 29, 21 cases, 13 deaths

PLAGUE—INSULAR

Hawaii Kaula, Feb 13, 2 deaths

PLAGUE—FOREIGN

Africa Mozambique, Nov 19 Dec. 6, 3 deaths
Total to Dec 6, 58 cases 28 deaths
India Bombay Jan 9 16 24 deaths
Calcutta Dec. 30 Jan 6 25 deaths
Karachi, Jan 7 14 9 cases, 8 deaths, Madras, Jan 6 12 1 death, Rangoon, Dec 30 Jan 6 30 deaths
Japan Formosa Dec 1 31 12 deaths
Kagawa Ken, to Jan 10 2 cases
Kobe 94 cases
Nara Ken, 2 cases, Osaka, 140 cases
Yamaguchi (Shimonoseki) 8 cases, 1 death
Mauritius Dec 14 28 7 cases 5 deaths
Persia Selstan, Jan 18, 200 deaths

Book Notices

INFANTILE MORTALITY AND INFANTS MILK DEPOT By G F McCleary M.D., D.P.H., Medical Officer of Health of the Metropolitan Borough of Battersea Cloth Pp 135 Price, 6 shillings net. London P S King & Son, 1905

This book deals with the problem of infant mortality and the measures taken to reduce it in various countries, in France, England and the United States. Attention is called at the outset to the declining birth rate, both in England itself and in some of the colonies, especially Australia. It is a declining fertility which has evidently stimulated McCleary to write the book. He points out the urgent necessity of reducing the high mortality among infants in order to offset the low birth rate, and in discussing the causes of this high mortality gives the chief place to improper feeding. To correct this he lays down two general principles. First, a more general encouragement of breast feeding, and, second, where this is impossible the provision of a pure, properly prepared cow's milk. The elaboration of these two principles constitutes the bulk of the book, and while throughout due emphasis is laid on the superiority of breast feeding, McCleary concerns himself mainly with a discussion of the methods in vogue to attain the second, i.e., the supply of a pure substitute food. This resolves itself into a detailed account of the now well known "milk laboratories," "stations" or "depots" as they are conducted in different countries.

Two institutions in France are first described the *Consultation de Nourrissons* and the *Goutte de Lait*. The former has for its chief object the encouragement of breast feeding, food and money prizes being awarded to nursing mothers whose infants make satisfactory progress, the mothers with their infants reporting at stated intervals to a dispensary or hospital. As a natural development from this institution arose the *Goutte de Lait*, the purpose of which is the provision of a pure milk, whole or modified, to such infants as have been deprived of their natural food supply. Rigid medical oversight of the infants is maintained in both of these organizations, if they do not report regular the milk is stopped.

The American laboratories are next described, the Strauss stations in New York being taken as a type. Lastly, the English "depots" are described much in detail. McCleary considers these various institutions in the order in which he apparently thinks they have been established, but makes no mention of the first one of the kind ever started, that in Boston in the summer of 1890 under the direct supervision of Rotch. The first *Goutte de Lait* is reported as being established in Paris in 1892, the first "depot" in England in 1899. The wide distribution of these stations is evidenced from the list given, showing their establishment throughout England, in Europe North and South America. Most of the English "depots" are under municipal control, all in America under private control except the one at Rochester, which is a municipal organization. This is mentioned in high terms by Dr McCleary as being superior to any similar "depot" in England. One of the best features of this laboratory, by the way, is the modifying which is done at the farm in the country. The importance of the farm and dairy end of the milk problem is duly emphasized throughout the book.

The work as a whole is an extremely interesting account of the world wide movement for a better and purer milk for infants a movement arising in France and England from a contemplation of the declining birth rate and the consequently greater necessity of preserving the infants actually born, and arising in the United States from humanitarian motives, pure and simple. It is of interest mainly, however, to health officials and to those pediatricians actively engaged in obtaining for city infants a supply of pure milk. It is of no help to a physician in solving the problem of a given case of difficult feeding. No details are given. To those familiar with the methods in vogue in American cities there is nothing new in the book, and they will derive but little help in solving the problem of city milk. In this respect at least our confrères across the water have taken a leaf out of the Yankee book and adapted an American institution to their own municipal peculiarities.

A TEXT-BOOK OF THE DISEASES OF THE EAR, NOSE AND PHARYNX By D B St John Roosa M.D., LL.D., and B Douglass, M.D. Cloth Pp 621 Price, \$3.00 net. New York The MacMillan Co., 1905.

This volume contains over eighty pages devoted to the anatomy and a brief review of the physiology of the ear. The subject of foreign bodies in the ear is set forth very fully and in a most interesting manner. Eighty two pages are devoted to the diseases of the nose, throat and nasopharynx, to which so many aural affections owe their origin. This section is fairly complete, although the student might desire somewhat fuller directions. Thus, speaking of cauterization of the turbinates, "a flat nasal electrode attached to a proper electric apparatus" is recommended. And when enlarged tonsils are present with adenoids the authors advise the removal of the tonsils before attacking the adenoids, but do not express any preference as to the method. Their reasons for dividing chronic non suppurative inflammation of the middle ear into catarrhal and proliferous inflammation, and the diagnosis between both and diseases of the labyrinth by means of the tuning fork, are elaborated. They protest against the tendency of some neurologists to call all cases in which vertigo is a symptom Ménière's disease, and would limit the term to disease of the labyrinth. Various radical operations, including Roosa's, for mastoid disease are described in detail. A chapter on deaf mutism, with suggestions for the mechanical relief of deafness, closes the volume. There are 108 cuts illustrating the text, but in a few cases the letters referred to in the legends are lacking. The text is generally clear and the diction good. We find a few long, involved sentences, such as the second paragraph on page 340. A few grammatical and rather numerous typographical errors will no doubt be corrected in subsequent editions. The book may be recommended as a safe guide.

THE PATHOLOGY OF THE EYE. By J H Parsons B.S., D.Sc. Vol II Histology—Part II Cloth Pp 770 Price \$3.50 New York G P Putnam's Sons, 1905

In the second volume of this elaborate work Mr Parsons has placed the science of medicine in general and that of ophthalmology in particular under a deep obligation. He reviews and profusely illustrates the histology of the crystalline lens, the vitreous, choroid, retina, optic nerve, orbit and the lacrimal apparatus. It must be borne in mind that the histology spoken of refers not only to normal conditions but to pathologic ones, so that this work is practically a textbook dealing with abnormal conditions generally found in the structures mentioned. Probably the most valuable portion of the work is that touching the various tumors of the eye, and we know of no monograph on the subject that compares with it in a practical demonstration of the changes found in this class of tissue alteration. Although the micro photographs and illustrations generally are no better in quality than those seen in other books of the kind they serve their purpose very well, and even when only diagrammatic, are useful. We especially commend the index of illustrations and think that many other writers might well take a leaf from Mr Parsons' monograph in this particular. Space does not permit a reference to the many important original observations of the author, but we can not refrain from drawing the reader's attention to the elaborate descriptions of choroidal changes, especially of the neoplasms, and that affect that membrane. We are certain that the work will long stand as an important contribution to the pathology as well as to the normal histology of the eye.

A SYSTEM OF MEDICINE. By Many Writers Edited by T C Allbutt and H D Rolleston. New Edition. Revised Throughout with Additions. Vol I Cloth. Pp 1209 Price, \$5.00 New York The MacMillan Co., 1905

This is the first volume of the second edition of this system. It is the intention of the authors to revise and bring out one volume a year, each new volume corresponding to one of the first edition, so that the original edition will gradually be superseded by the new. Besides the prolegomena, Volume I contains some of the acute affections, such as erysipelas, influenza, diphtheria, infective endocarditis, cerebrospinal fever and enteric fever. Cholera and plague have been transferred to the tropical medicine section. The first article, on the history of medicine, is a new contribution by Allbutt. The article on medical statistics has been rewritten entirely. The arrangement of the article on dietetics has been altered somewhat, and

this chapter also contains a section on the physiologic principles of dietetics. New articles on exercise in the treatment of disease and on x-rays are added. The chapter on the clinical examination of the blood and its significance is contained in this volume, while the article on roentherapeutics has been transferred to another volume. Among other things discussed in Volume I are climate in the treatment of disease, massage, hydrotherapy, the hygiene of youth, principles of drug therapeutics, old age, life insurance, inflammation, fever, the general pathology of nutrition and of new growths, and nursing.

BACTERIOLOGY OF PERITONITIS. By L. S. Dudgeon, M.R.C.P., and P. W. G. Sargent, M.A., M.B., B.C., I.R.C.S. Cloth. Pp. 243. Price \$2.50 net. Chicago: W. T. Keener & Co., 1905.

The authors state that they have attempted to place the bacteriology of acute peritonitis on a sound basis, and to deduce from the knowledge thus gained some facts which may serve to guide the surgeon in the treatment of the various diseases which are grouped under the names of septic or suppurative peritonitis. The relationship of the various affections of the contents of the abdomen to peritonitis are discussed at great length, and the role of the phagocytes in peritonitis also receives considerable attention. Speaking of the treatment of this condition, the authors state that the question between local irrigation and dry sponging carried out with gentleness, is better than irrigation. The question of drainage and serum treatment are discussed briefly. The authors believe that in the large majority of cases of acute peritonitis it is the colon bacillus which kills the patient. The only serum, therefore, which would be of value in helping to diminish the mortality of peritonitis is a multivalent anti-coli serum. The indiscriminate use of antitoxic sera is condemned as being both useless and unscientific.

PATHOGENIC MICRO-ORGANISMS INCLUDING BACTERIA AND PROTOZOA. A Practical Manual for Students, Physicians and Health Officers. By W. H. Park, M.D. Revised and enlarged with 115 illustrations. Cloth. Pp. 556. Price \$3.75. New York: Lea Brothers & Co., 1905.

The most notable feature of this edition is the part devoted to the protozoa. Hitherto textbooks on bacteriology have failed to recognize the importance of animal organisms in the causation of disease. Obviously it is advisable that these organisms should be discussed together with the vegetable organisms. Sixty pages are devoted to the discussion of the ameba, trypanosomes, the spirochetes of relapsing fever and syphilis, the malarial organisms and the protozoan-like bodies found in smallpox and allied diseases. In the appendix the author discusses the agglutinins, the hemolysins, the diplo bacillus of Morax-Axenfeld and the relation of the stegomyia to yellow fever. The part on bacteria also has been revised carefully, thus making the work a valuable summary of the present day knowledge in this field of medicine.

A TEXT BOOK ON THE PRACTICE OF GYNECOLOGY. For Practitioners and Students. By W. Lister Ashton, M.D., LL.D., Professor of Gynecology in the Medical-Chirurgical College of Philadelphia. Octavo. 1079 pages with 1046 original line drawings. Price, \$6.50 net. Philadelphia: W. B. Saunders & Company, 1905.

Ashton appreciates that the average young practitioner has received only most superficial information regarding the technique of gynecologic operating and the diagnosis of diseases of women. He therefore takes up clearly and succinctly each step of each procedure, so that it is impossible to misunderstand his meaning. In place of the routine practice of devoting a general chapter or chapters to physical examination the author details the method of examinations of each organ before considering its diseases. More than a thousand illustrations are shown, none of which is old or hackneyed, all are new line drawings made from apparatus, living models, the cadaver or the descriptions of operations by other operators. The book will be found decidedly practical.

THE SURGEON-GENERALS OF THE ARMY OF THE UNITED STATES OF AMERICA. A Series of Biographical Sketches of the Senior Officers of the Military Medical Service from the American Revolution to the Philippine Pacification. By James Evelyn Pilcher, M.D., Ph.D., LL.D., Major and Surgeon U.S.V., Cap. Ret. U.S.A., Secretary of the Association of Military Surgeons and Editor of the *Journal of the Association of Military Surgeons of the United States*. 8vo. Cloth. Pp. 114. Carlisle, Pennsylvania, The Association of Military Surgeons, 1905.

In addition to well written and comprehensive articles on the surgeon-generals of the United States Army, Major Pilcher

has given us in this book biographic notices, with portraits, of Samuel Preston Moore, surgeon general of the Confederate Army, of James McHenry and William Eustis, military surgeons who became secretaries of war, and of Benjamin Rush, the whole constituting a volume of interest not alone to the military medical officers but to the profession at large. All interested in the lives and achievements of medical men who have helped in the making of the history of this country will find recreative reading in this book.

DOSE-BOOK AND MANUAL OF PRESCRIPTION WRITING with a List of Official Drugs and Preparations and Many of the Newer Remedies with Their Doses. By D. Q. Thorston, M.D., Ph.G. Third Edition. Revised and Enlarged and Adapted to the Eighth Revision (1905) of the United States Pharmacopoeia. Flexible Leather. Pp. 302. Price, \$2.00 net. Philadelphia: W. B. Saunders & Co., 1905.

This book is of value to the student as a guide to the proper construction of the prescription. It includes directions for converting the apothecary weights into the metric system, and vice versa. That part devoted to prescription writing and in compatibilities is of especial value. The appendix includes a list of the common poisons and methods of treatment of poisoning. This edition also contains a list of the drugs with their doses arranged in accordance with the recent changes established by the new Pharmacopoeia.

MASSAGE AND THE ORIGINAL SWEDISH MOVEMENTS their Application to Various Diseases of the Body. By K. W. Ostrom. Sixth edition revised and enlarged with 115 illustrations. Cloth. Pp. 184. Price, \$1.00. Philadelphia: P. Blakiston's Son & Co., 1905.

The physician's knowledge of the general methods of massage, together with his familiarity with anatomy and physiology, enable him to work out the details of mechanical treatment, but he would far better have some such book as this by Ostrom as a guide. Details are given for massage of all portions of the body and the illustrations make it easy to understand the directions. This sixth edition has been thoroughly revised and a number of new portions added. The physician who is not using any of these methods in his treatment is omitting a valuable part of the therapy that is open to him.

A TEXT BOOK OF LEGAL MEDICINE. By Frank Winthrop Draper, A.M., M.D., Professor of Legal Medicine in Harvard University. Fully illustrated. Cloth. Pp. 573. Price, \$4.00 net. Philadelphia: W. B. Saunders & Co., 1905.

Draper writes with the inspiration of his own realization of the importance of the subject. He urges on the medical student careful study, because of the likelihood of medicolegal complications in the first case undertaken in his practice. Draper feels that not enough attention is paid to this subject in medical colleges. The reader finds in this book the sympathy of a man of wide experience and most practical ways of viewing things. The book has been carefully kept within reasonable limits, and except for the departments of toxicology and psychiatry will be found a full text book on medicolegal affairs.

LEHMANN'S MEDIZINISCHE ATLAS. Band V. Atlas Typischer Röntgenbilder vom normalen Menschen. By Dr. med. Rudolf Grashof. Mit 97 Tafelbildern (Autotypen) in Originalgröße und 42 Konturzeichnungen (davon 11 als Uebersicht) ferner 14 schematischen Figuren im Einleitungstext. Cloth. Pp. 92. Price, \$4.00. Munich: J. H. Lehmann's Verlag. New York: P. B. Hoeber.

This atlas consists of 97 reproductions of radiographs of the various parts of the body, particularly of joints, which are likely to be injured by a trauma and in which the diagnosis may be subject to doubt. Each illustration is accompanied by a suitable explanatory text. The book also contains 42 outline drawings and 14 diagrammatic sketches. The radiographs are excellent and the work can not fail to elicit the appreciation of those who are interested in roentgenology.

VITAL QUESTIONS. By H. D. Chapin, M.D. Cloth. Pp. 189. Price, by mail, \$1.10. New York: T. Y. Crowell & Co.

The title of this volume may be amplified by saying that the work discusses the fundamental problems of the physician's life and activity. Some of the "Vital Questions," as subdivided by chapters, are "Unequality—the Question of Opportunity," "The Unfit—the Question of Survival," "Poverty—the Question of Subsistence," "Success—the Question of Achievement," "Death—the Final Question," etc. The entrance of the physician into politics, into work for social betterment, in medical society work, etc., is due to his thought on these social problems which Chapin discusses. This book will stimulate the endeavor to be of service to humanity.

FEB 24, 1906

Miscellany

SPEMANN'S HISTORISCHER MEDICINAL-KALENDAR bearbeitet von Prof. Dr. J. Pagel und Prof. Dr. J. Schwalbe in Berlin. Paper Pp. 184. Price 75c. Munich J. F. Lehmann's Verlag. New York P. B. Hoeber.

This calendar is in the form of a tablet, each leaf of which represents two days of the year. At the head of each page is a reproduction either of a famous painting dealing with some medical subject or of some well known caricature drawing or the portrait of a medical celebrity. Besides this, under each date are noted one or more occurrences of importance in medicine, the announcement of the birth or death of a man prominent in research work and in practice, and pertinent aphorisms. Many astronomical data are also recorded.

SKIASCOPY AND ITS PRACTICAL APPLICATION TO THE STUDY OF REFRACTION. By E. Jackson A. M. D. Fourth Edition. Revised and Enlarged with 28 Illustrations. Cloth Pp. 117. Denver Herrick Book and Stationery Co., 1905.

With a view to making this little treatise more complete, Jackson has added two chapters, one on exact skiascopy and the other on auto skiascopy. In the first chapter are discussed the procedures necessary to render skiascopy valuable, such as the dark room, the source of light, mirror, etc. In the second chapter the reader is instructed how to measure his own refraction by the use of an ordinary looking glass, in addition to the apparatus commonly employed for the test.

MATERIA MEDICA AND THERAPEUTICS. An Introduction to the Rational Treatment of Disease. By J. M. Bruce. New and Enlarged Edition. Cloth Pp. 632. Price \$1.75 net. Chicago W. T. Keener 1905.

A change, which the author believes will be regarded as an improvement, is the introduction of greater detail respecting the chemical and pharmaceutical relations of the individual drugs. An entirely new part has also been added, containing an account of the materia medica and therapeutics of the drugs mentioned in the Indian and Colonial Addendum to the British Pharmacopoeia.

READY REFERENCE HANDBOOK OF DISEASES OF THE SKIN. G. T. Jackson M. D. 91 Illustrations and 3 plates. Fifth edition. Cloth Pp. 676. Price \$2.75 net. Philadelphia Lea Brothers & Co. 1905.

The present edition is considerably larger than the preceding one because of the addition of new sections on affections of the skin recently recognized. As heretofore, the symptoms, diagnosis and treatment are especially considered, and the alphabetical arrangement of the diseases, a feature which has made this work popular, is preserved. Many new prescriptions have been added to the appendix.

A MANUAL OF BACTERIOLOGY. By H. U. Williams M. D. Revised by R. M. Bolton M. D., 108 Illustrations. Fourth Edition. Revised and Enlarged. Cloth Pp. 357. Paper \$1.75. Philadelphia P. Blakiston's Son & Co. 1905.

This edition maintains the characteristic features of previous editions but contains many additions, especially in the chapters on bacterial poisons and on immunity. The appendix is devoted to a consideration of several pathogenic protozoa, the *Amoeba dysenteriae*, the *Plasmodium malariae*, trypanosomes and organisms found in smallpox and vaccinia.

PHYSICAL DIAGNOSIS. Including Diseases of the Thoracic and Abdominal Organs. A Manual for Students and Physicians. By F. Le Ferre M. D. Second Edition. Revised and Enlarged. Cloth. Pp. 479. Price \$2.25 net. Philadelphia Lea Brothers & Co. 1905.

Among the new features of this edition are the very complete revision of the chapter on topographic and rational anatomy and the many new illustrations, including a number of radiographs of diseases of the heart and aorta. Such revisions as were necessary to bring the work up to date have been made.

OIL WELLS IN THE WOODS. By J. C. O'Day M. D. With Illustrations by Miss Ethel Farmer and Photographs Collected by the Author. Cloth Pp. 359. Deposit N. Y. The Ogunn Press 1905.

Dr. O'Day has written a tale that is interesting, but which is not notable for literary merit. The love story is woven about scenes in the oil wells of Pennsylvania, and its decided local flavor gives evidence of the author's intimate knowledge of the oil fields.

Catatonia.—Mouratoff after a critical study of this type of mental ailment and of its literature concludes that it is entitled to be considered rather as a morbid species by itself, with a somewhat definite though varied symptomatology, but with one symptom always constant, and a generally constant termination in dementia.

Graft.—Not many years since, a half page advertisement of a sanitarium appeared in a well known medical journal, offering stock of the sanitarium company on very advantageous terms to doctors sending patients to that institution. It did not lessen the insult of this intimation to learn that the leading spirit of the sanitarium company was a fellow of a learned medical organization of this state. A certain mineral springs company has recently, it is said, offered its stock to physicians, so as to induce them to advocate the use of its waters to their patients. Who does not know that in this city some opticians give, and some oculists shamefully accept, commissions on sales made to patients? The public should realize that an oculist, who insists on his patients buying their glasses at one or two special stores, lays himself open to the suspicion of being bribed to do so by a commission from the dealer. The same suspicion attaches to the doctor who unduly urges patients to buy medicines from one apothecary. It is true that spectacles and medicines should be accurately made and compounded, but there are usually too many reliable dealers, especially in large cities, to necessitate so restricted a choice for the mere benefit of the patient. Another scheme, to impose on the patient and extract from him what is practically two fees, consists in giving him a prescription for medicine under a special name agreed on by the doctor and the druggist with whom he is in collusion. The patient is then obliged to go to the apothecary mentioned by the doctor even if it be several miles out of his way, under the impression forsooth that no other apothecary prepares the remedy so carefully. This business enterprise is not unlike that practiced by some hospitals, which, to obtain a large and interesting accident service, keep beer and whisky ready for the men running the patrol wagon. Little wonder is it that the injured are at times driven many unnecessary squares and that certain institutions can show an unusually long list of accident cases. Whether these institutions similarly profit by using their private wards and rooms as boarding houses for members of state legislatures and their friends, who visit the centers of gaiety for pleasure or business, need not be discussed in this paper.—J. B. Roberts.

The Logical Basis of the Sanitary Policy of Mosquito Reduction.—Sir Donald Ross, in *Science* (vol. XXI, No. 570, page 689, Dec. 1, 1905), said that the life of gnats, like that of other animals, is governed by fixed laws. Local reduction, that is, artificial reduction of the density of population, practically resolves itself into (a) direct destruction, and (b) artificial creation of unfavorable conditions. Suppose a box containing a million gnats were to be opened in the center of a large plain, and that the insects were allowed to wander freely in all directions. During the first minute most of the insects would fly toward every point of the compass. At the end of a minute a few might fly straight on and a few straight backward, while the rest would travel at various angles to the right or left. At the end of the second minute the same thing would occur. At last, after their death, it would be found that an extremely small proportion of the insects had moved continuously in one direction, and that the majority of them had wandered more or less backward and forward and had died in the vicinity of the pool or box from which they originally came. The law determining the behavior of these insects may be called the centripetal law of random wandering. It ordains that when living units wander from a given point, guided only by chance, they always tend to revert to that point. Mosquitoes guided either by chance or by search for food are not likely to wander continuously in one direction. They will always tend to persecute most those houses which lie in the immediate vicinity of their breeding pool. This is not understood by many who think that mosquitoes radiate as rays of light from a center, and argue that, therefore, it is useless to drain local breeding pools because of the influx of mosquitoes from without. Such an influx certainly exists, but it can not generally compensate for local destruction. Consider a tract of country over which numbers of mosquito breeding pools are scattered, with houses and other feeding places lying among them. Drain away all

the pools to the right of a straight line drawn across this country, leaving all those to the left of it intact. How many mosquitoes will there now be on the right side, compared with those on the left side? We suppose that, before the drainage was effected mosquitoes were then breeding fairly uniformly over the whole country, that there was a certain amount of migration across the line, both ways, and since the density was equal on both sides, this migration must also have been equal and opposite—that is, as many emigrants must have been constantly passing from right to left as from left to right. After drainage the following changes would occur. The insects bred as before on the left side of the line, and some continue as before to cross over into the drained country, but in the latter, on the right of the line, propagation is entirely checked and the migration from it to the left of the line now ceases. Hence not only must there be a decrease of mosquito density on the right side of the line but also a decrease on the left of the line—that is to say, the drainage has affected the mosquito density not only up to the line of demarcation but beyond it. And moreover, since the migration was formerly equal from both sides of the line, the mosquitoes gained by immigration into the drained country must be exactly lost by the undrained country. The number of immigrants therefore into any area of operations must, for practical purposes, be very small or inappreciable a short distance within the boundary line. The effect of wind requires examination. With a wind blowing continuously from one direction the indication would be to extend the drainage further in that direction. Obviously wind may scatter mosquitoes, but it can not create them nor prevent the total average reduction due to anti-propagation measures as some people seem to think. It is, however, very doubtful whether wind does drive or scatter mosquitoes to any great degree, they are extremely tenacious of locality. The statement is often made that mosquitoes are brought into towns in trains, carts and cabs. The number introduced in this manner must always be infinitesimal compared with those that fly in or which are bred in the town itself. Moreover, if vehicles bring them in they may also take them out. In conclusion, as a general rule for practical purposes if the area of operations be of any considerable size immigration will not very materially affect the result.

The Proper View to Take in Organization—We can accomplish nothing outside of co-operative and organized work, and though we fail to realize all we hope for, we can attain much that will improve our present condition. Is it not childish for us to permit personal prejudices and predilections as to methods and men turn us aside from the attainment of this power we so plainly need? All great accomplishments demand the sacrifice of the smaller things for the greater in view, and if we could serve best the great profession to which we belong, and the present generation and those to come who look to us with hope and confidence, we must follow this rule that obtains in all great enterprises. Let us not be too ready to criticize methods and men, we ourselves are fallible. The future will work out many problems that perplex us now, and under broader and more intelligent views the needs will be met and the bad in men and methods will be thrown aside. The more strongly and heartily we combine now for this great object, forgetting the little differences that must come up, the sooner will we accomplish this great purpose. The profession of medicine will rise to a higher plane of proficiency and will occupy a higher place in the esteem of the people.—B F Eager, in *Kentucky State Medical Association Bulletin*

The Right to Use Any Beneficial Method—The right to select remedies and methods with absolute freedom is so generally recognized by all the so called schools that sects are sects now only in name. Surgery is alike in all, dietetics and nursing know no school. Homeopathy no longer pretends to administer infinitesimal doses of inversely potentialized medicines, expecting them to produce symptoms like those of the disease treated, eclectics no longer assume to have a monopoly of wisdom in the selection of therapeutic remedies, and physio-medicals can boast of no useful information that may not be known by all. Then why should we not have a united profes-

sion? Many believe that we may have an undivided profession and have declared in favor of union by the simple abandonment of sectarian names. These designations have lost their original meaning, and are retained presumably for some supposed advantage in the proclamation which they make to the public. The constitution of the reorganized state and county societies wisely provides that any reputable physician who will agree to practice nonsectarian medicine shall be eligible to membership in these societies and thereby in the American Medical Association. This has raised the question as to what is implied in the practice of nonsectarian medicine. It is the practice of medicine and surgery without proclaiming to the public that such practice is based on any exclusive method or system. Truth as one sees it is to be the light, judgment as now to be the guide. The only restriction being that one is to refrain from using a sectarian designation which at best serves only to hold out a claim to the public that one has some remedy or method not possessed by our confrères.—*Columbus Medical Journal*

The Extensor Digitorum Communis Reflex—A Morselli (*Rivista di Patologia nervosa e mentale*), has studied this reflex in various pathologic conditions and concludes that it is a phenomenon of muscular reaction dependent on the tone and trophic condition of the nervous centers. It is constantly present in normal individuals and is induced by percussion of certain points near the humeral condyles and on the forearm and appears in the form of extension of the fingers and the hand. It may not be present in children under 3 years and is dulled in old age. In pathologic conditions it may be exaggerated, weakened or abolished. In some nervous affections the intensity of this reflex may be a differentiating symptom, as, for example, between *tubercles* and *pseudo tubercles* from alcohol, and between traumatic and alcoholic neuritis, since in the toxic forms the muscular reaction is torpid or feeble while in the others it is exaggerated. In hysteria and hystero epileptic conditions it may be exaggerated while in epileptic states and in some neurasthenies it is weakened and finally abolished. In alcoholic and morphinic insanity the reflex is torpid while on the other hand in dementia præcox, in paresis and in mania it seems to be exaggerated.

Quacks in Turkey—The Constantinople correspondent of the *Lancet* states that in Turkey quacks of all kinds flourish. He reports that the Turkish physician, Dr Nouri Effendi, recently made a tour in the provinces and reported a deplorable state of affairs occasioned by the utter ignorance of the population and the inability to meet the difficulties arising out of different contagious maladies. The people never attach any importance to the first manifestations of the disease, but in later stages they call in all sorts of persons professing to be well versed in occult sciences. These persons attribute every malady to an evil eye. Their routine treatment is to administer a potion of water into which melted lead has been dropped, the draught to be taken during the recital of an incantation. The shapes assumed by the lead dropping into the water are pointed out to have various, generally menacing, significances. Other quacks prescribe a diet which has to be adhered to for 70 days and which consists of dry bread without salt. If the condition disappears the skill of the quack is praised. If the disease persists then it is due to the unhappy star of the patient's destiny. Dr Nouri Effendi declared also that in consequence of such quackery and ignorance preventable and curable maladies are propagated with disastrous results.

Poisoning of a Child by Strychnin Tablets—Dr Vinnedge reports in the *Lancet Clinica*, May 6, 1905, an instructive case indicating the necessity of care in dispensing medicine. A physician left nine red tablets, each containing 1/60 of a grain of strychnin, on a table in a bedroom by a patient, with instructions for their use. The patient, not being confined to bed, left the room some time later, and on her return saw that the pills which had not yet been taken had disappeared. She found that one of the children had swallowed them. The child died. The attending physician, in his sworn statement before the coroner, said that as he went into the house he noticed the children playing in the front room. In spite of this, the dan-

ger of leaving the tablets loose on the table apparently did not occur to him Dr Vinnedge, who reports the case with the consent of the attending physician for the sake of the warning it contains, quotes from the law of Indiana on the subject, from which it appears that the only restraint and guide the physician has is his reasonable care and diligence" The lesson is obvious that no tablets which would even be harmful to children, should be dispensed in the manner spoken of

Value of Discussions at Society Meetings—I must admit that many of these long, so called original papers I pass over, and simply read the discussions on them The discussions generally contain the meat of the nut They cover the ground in a condensed and concise manner We can in this way obtain a knowledge of the papers read by reading a few words in place of reading a great many Discussions of papers are usually limited to five minutes A great deal can be said in five minutes, provided the one speaking confines himself closely to the subject matter But when he speaks one half of the time in complimenting the speaker, then some time in excuses, he can not say very much in the two minutes remaining I think it would be well if the complimentary part was understood, and that no excuse or apologies were made, but let the five minutes be used in actual discussion of the papers.—George J Munroe, in *Cincinnati Lancet Clinic*

Floating Hospital in Northern Africa.—It is reported that the Presbyterian Board of Foreign Missions has established a floating hospital on one of the tributaries of the Nile In this way medical aid will be given to natives along the shores who suffer from pulmonary and eye diseases The hospital boat will be equipped with all modern appliances for the treatment of trachoma and other eye diseases, and will make two trips each month from the mouth of the Sohag, a tributary of the Nile, to its source The boat is named in memory of James A Elliott

State Boards of Registration

COMING EXAMINATIONS

MAINE State Board of Registration of Medicine City Building Portland March 13 Secretary Wm. J Maybury Saco
CONNECTICUT Medical Examining Board, City Hall New Haven March 13-14 Secretary Charles A Tuttle, New Haven.
MASSACHUSETTS Board of Registration in Medicine, State House Boston, March 13-14 Secretary Edwin B Harvey, Boston

Minnesota January Report.—Dr O E Lanier, of the Minnesota State Board of Medical Examiners, reports the written examination held in St Paul, Jan. 2-4, 1906 The number of subjects examined in was 12, total number of questions asked, 95, percentage required to pass, 75 The total number of applicants examined was 27, of whom 19 passed and 8 failed The following colleges were represented

College	PASSED	Year Grad.	Per Cent
Queen's University Ontario	(1896) 77 1	(1901) 77 5	(1903) 81 4
Columbia University New York		(1905)	85 1
Barnes Med. Coll.		(1905)	78 5
University of Minnesota	(1905) 75	77 7	83 5
University of Illinois		(1905)	78 7
McGill University		(1902)	88 7
Jefferson Med Coll		(1905)	77 9
Hahnemann Med Coll Chicago		(1905)	77 6
Harvard University		(1898)	85 5
University of Pennsylvania		(1905)	81 7
Laval University Quebec		(1899)	78 3
Northwestern University		(1905)	85 8
University of Leipzig Germany		(1893)	80 1
University of Michigan Romeo Dept.		(1904)	85 3
Omaha Med. Coll	FAILED		
Jefferson Med Coll		(1902)	69 9
Hamilton University		(1897)	74
University of Minnesota	(1904) 63 8	(1905) 70 9	*75 1
Laval University, Quebec		(1905)	73
Rush Med Coll		(1902)	72 2
		(1902)	68 9

* Low mark in the important branches

New Requirements in Nebraska.—The following resolution, effective July 1 1906 has been adopted by the Nebraska State Board of Health "Resolved, That applicants for a license to practice medicine in the state of Nebraska shall present to the board of examiners evidence of having university or college

degree or a high school diploma of college entrance standard or in lieu thereof applicant must pass a satisfactory examination before the state superintendent of public instruction"

South Dakota January Report.—Dr H E McNutt, secretary of the South Dakota Board of Medical Examiners, reports the written examination held at Sioux Falls, Jan 10 11, 1906 The number of subjects examined in was 12, total number of questions asked, 90, percentage required to pass, 75 The total number of candidates examined was 12, of whom 11 passed and 1 failed Twelve candidates were granted license by reciprocity The following colleges were represented

College	PASSED	Year Grad.	Per Cent
University of Nebraska		(1905)	81 6
University of Nashville		(1905)	75 0
American Coll of Med. & Surg., Chicago		(1904)	78 7
University of Toronto		(1890)	83 7
Creighton Med Coll		(1905) 82 7, 83 4,	88 7
College of P & S Chicago		(1906) 77 9,	85 6
Lincoln Med Coll		(1906)	79 5
University of Iowa		(1903)	*78 2

University of Vermont
* Reciprocity with supplemental examination, 4 subjects.
Failed on previous examination, this was his second examination.
** Third examination

SURGERY

1 What is the point of selection for resection of the ribs and why? Name the conditions requiring and the usual method of performing (a) thoracentesis, (b) resection of ribs 2 A man falls from a chair in a saloon and receives a slight scalp wound. He goes to bed and is found four hours later, in a state of coma. To what may the coma be due and how would you treat the patient? 3 What are the symptoms of stone in the bladder? 4. What complication is apt to result from a fracture of the tibia and fibula immediately below the knee joint with backward displacement of the proximal fragments? Treat the fracture. 5 Name the different varieties of urethral stricture and describe the methods of treating them 6 How would you treat a septic infection of an extremity? 7 State what you consider giving your reasons to be the most suitable suture material for (a) intestinal anastomosis (b) uniting the peritoneum (c) uniting the muscular layers of the abdominal wall (d) closing the skin 8 What general principles must be followed in treating fractures occurring at or near joints? 9 What is a sprained ankle? Give treatment. 10 What precautions should be observed in producing general anesthesia with (a) chloroform, (b) ether and local anesthesia with cocaine?

BACTERIOLOGY

1 What bacteria are associated with inflammation and suppuration? 2 What are Koch's postulates? 3 Give in detail a method of staining for the tubercle bacillus. 4 Is the Widal reaction always conclusive? Describe the method of producing it. 5 To what uses in his ordinary work can a general practitioner put a microscope?

ANATOMY

1 Describe the first, ninth tenth and eleventh dorsal vertebrae. 2 Draw a diagram of and describe the ulna 3 Mention the muscles of the forearm, and give origin and insertion of any two of them 4 Describe Hesselbach's triangle. 5 Describe the internal iliac vein. 6 Give nerve and blood supply of the pancreas. 7 Describe the canal of Wirsung 8 Describe the hepatic duct. 9 Describe the larynx. 10 Describe Meckel's ganglion.

DISEASES OF WOMEN

1 Give cause, diagnosis and treatment of "erosion of the cervix." 2 Give differential treatment of extrauterine pregnancy and intrauterine abortion. 3 Give treatment of membranous dysmenorrhea. 4 Give diagnosis and treatment of gonorrhea. 5 Describe infantile uterus Give treatment.

EYE AND EAR.

1. Define blepharitis epiphora photophobia, pterygium and hyperopia. 2 Sketch cross section of eyeball in antero-posterior plane. Name and show relation of parts 3 Define dacryocystitis Give treatment of an acute case. 4. Outline treatment for ophthalmia neonatorum Give preventive treatment. 5 Name symptoms which would justify a mastoid operation

SKIN AND VENEREAL.

1 How would you treat a case of acute gonorrhea, and how would you positively diagnose gonococci microscopically? 2 Describe and treat lupus vulgaris. 3 Differentiate eczema and seborrhea of the scalp and treat the last named. 4 Describe primary chancre. How would you treat a patient who has one? 5 Name four (4) contagious diseases that have diagnostic skin eruptions. Describe the eruptions of each

PHYSIOLOGY

1 Describe chyme and chyle. 2 Give the normal constituents, reaction and specific gravity of urine. 3 Whence do bones derive their nourishment? 4 Give the mechanism of respiration and its purpose. 5 Give examples of morbid reflex action 6 Describe the temporary and permanent sets of teeth 7 What are the functions of the lungs? Describe their action 8 How is animal heat produced 9 Describe the physiology of vision. 10 Name the active principles of the digestive secretions, and describe how each affects the food.

OBSTETRICS

1 Describe the internal organs of generation and their anatomic relations giving blood and nerve supply of each. 2 Describe a transverse presentation giving diagnosis and your management of the same in a given case. 3 Give symptoms indicating death of child in utero 4 Give usual relative time of the different stages of labor 5 Give the indications of syphilis in the new born child. 6 How would you manage a prolapsed funis? What are the dan-

gers? 7 Define uterine inertia and give its immediate and remote significance. Give treatment. 8 Describe in full your management of the third stage of labor. 9 When would you use forceps with head in the upper strait? Describe manner of so using them. 10 Give causes of lacerated cervix, also time and manner of treatment.

GENERAL PATHOLOGY

1 How should sputum be examined when tuberculous infection is suspected? 2 What is a giant cell? 3 What degenerative changes occur in arteries? 4 Give the causes of edema. 5 Where do we generally find myofibrin? 6

THERAPEUTICS AND PRACTICE

1 How do borax and boric acid differ chemically and therapeutically? 2 How would you use croton oil? 3 Describe the proper method of giving hypodermic injections. 4 What do you know of the uses and effects of scopolamine? 5 Mention a soluble and insoluble salt of lead and tell how and for what purpose they are used in medicine. 6 Name one important complication, one sequel, and give ordinary treatment of typhoid fever. 7 How should apoplexy from cerebral hemorrhage be treated? 8 Define hysteria. 9 Differentiate abscess and cancer of liver. 10 What do you understand neurasthenia to be?

TOXIC MATERIA MEDICA, THERAPEUTICS AND PRACTICE

1 In what pathologic conditions is camphor used? Give dose used internally. 2 Give some of the therapeutic uses of cuprum sulphate also the doses. 3 Name and give dose of a hydragogue, also of a cholagogue. 4 Name some of the best remedies to control vomiting and give dose of each. 5 For what is apomorphia used? Dose of same. 6 Give symptoms and treatment of a case of malaria fever. 7 Write a prescription for insomnia. 8 Give the dose of (a) atropine, (b) atropia, (c) potassium iodide. 9 Give symptoms and antidote in opium poisoning. 10 Give differential diagnosis between alcoholism and apoplexy.

CHEMISTRY

1 What do you understand by chemical action? Give examples. 2 Distinguish between synthetic and analytic reactions. 3 What group of elements (radicals) is characteristic of all hydrates, carbonates, sulfates, phosphates? 4 What are alkaloids? Name the essential alkaloids of opium. 5 Give chemical name and formula of lunar caustic. 6 Give chemical name and formula of fuming sulfuric acid. 7 What elements are soluble (a) when heated in superheated water, (b) with acetic acid, (c) with hydrochloric acid? 8 What causes hardness in well water? 9 What chemical is in raisins, rat cheese and poison ivy paper? What are the best antidotes for poisoning by it and how may the antidotes be most conveniently prepared? 10 What is iodo-chemically considered? What antidotes for poisoning by it?

HOMOPATHIC THERAPEUTICS

1 How do you treat pneumonia? Give remedies used in each stage. 2 Outline your treatment of membranous croup. Give indications for remedies used. 3 Name and give indications for three prominent remedies in the treatment of diarrhea. 4 Differentiate between belladonna, china and secale in uterine hemorrhage. 5 Give characteristic symptoms calling for rhubarb in rheumatism. 6 Name two remedies (giving indications for their use) in nervous affections. 7 Outline your treatment of purpural clapsal in giving dose and potency of remedies used. 8 Differentiate nux vom, lycopodium and ipecac in stomach troubles. 9 Describe a case fully in which you would use sulphur. 10 Differentiate arsenicum, hepar sulphur and silica in pus affections.

MEDICAL JURISPRUDENCE

1 What are the powers of the coroner? 2 Of what importance is the gaping of the wound? 3 What are the postmortem appearances peculiar to death by apnea? 4 Differentiate rigor mortis from the rigidity of hysteria, catalepsy. 5 When called as a medical witness (a) must a physician obey the summons of the court? (b) must he be satisfied with the fee of an ordinary witness? or (c) when may he charge more for his services? and (d) why?

Virginia December Report—Dr R S Martin, secretary of the Medical Examining Board of Virginia, reports the written and oral examination held at Richmond, Dec 12 15, 1905. The percentage required to pass was 75. The total number of candidates examined was 125, of whom 40 passed, including 6 who were licensed by reciprocity, 17 failed. Sixty-seven undergraduates took a partial examination. One candidate handed in no paper. The following colleges were represented:

College	PASSED	Year Grad	Per Cent
Hospital Coll of Med	(1887) 95, (1900) 86, (1901) 86, (1904) 78	(1905) 70	
University of Virginia	(1887) 85, (1905) 79	(1883) 75	
College of P and S, New York	(1904) 75, 75, (1905) 70	(1905) 70	
Pulte Med Coll	(1901) 80	(1901) 80	
Leonard Med Coll	(1907) 75, 70, 77	(1907) 75	
Columbian University	(1902) 80	(1903) 85	
Medical College of Ohio	(1894) 80, (1905) 70, 70	(1903) 81	
University of Pennsylvania	(1903) 75	(1903) 75	
University Coll of Med	(1880) 75, (1905) 75	(1905) 75	
National University Washington	(1880) 75, (1905) 75	(1905) 75	
Detroit Homeo Med Coll	(1880) 75, (1905) 75	(1905) 75	
University of Maryland	(1880) 75, (1905) 75	(1905) 75	
George Washington University	(1880) 75, (1905) 75	(1905) 75	
Maryland Med Coll	(1880) 75, (1905) 75	(1905) 75	
Tennessee Med Coll	(1880) 75, (1905) 75	(1905) 75	
Vanderbilt University	(1880) 75, (1905) 75	(1905) 75	

LICENSED BY RECIPROCITY

Woman's Med Coll, Baltimore	(1905)
Columbian University	(1899)
University of Maryland (2 candidates)	(1905)
Johns Hopkins University	(1905)
Maryland Med Coll	(1905)

FAILED

University of Maryland	(1903)	67
University of the South	(1904) 50, (1905) 74	
Howard Med Coll	(1904) 73, 73, 73, (1905) 74	
Leonard Med Coll	(1904) 73, 73, 73, (1905) 74	
University of Virginia	(1905) 71, 73, 74	
Medical College of Virginia	(1904) 60, (1905) 33	
Medico Chirurgical College Philadelphia	(1904) 60, (1905) 33	
Hospital Coll of Med	(1904) 60, (1905) 33	
Maryland Med Coll	(1904) 60, (1905) 33	
Baltimore Med Coll	(1904) 60, (1905) 33	

Wyoming January Report—Dr S B Miller, secretary of the State Board of Medical Examiners, reports the written examination held at Laramie, Jan 17, 1906. The number of subjects examined in was 11, total number of questions asked, 110, percentage required to pass, 75. One candidate was examined and passed.

PASSED

College	Year Grad	Per Cent
Jefferson Med Coll	(1891)	85.9

Medical Organization

What Can the County Society Do?

XII STOP TESTIMONIAL GIVING

At one of the "business" meetings during the year the subject of discussion may with great profit be "testimonials." Starting with the text that the giving of testimonials for any article employed therapeutically is reprehensible, the subject in its various aspects can be freely discussed. Every effort should be made to utilize the occasion to secure an agreement among all the doctors in the county that no testimonials whatever will hereafter be given. An appropriate proceeding would be, after proper notice, to bring the subject up in the form of a resolution declaring the society's adhesion to the pronouncement on this subject of the "Principles of Ethics" of the American Medical Association. Possibly in some societies this might best be done at the same meeting at which there is full consideration of the proprietary medicine evil.

XIII EXPOSE SWINDLING

At an early meeting to which some of the laity are invited the two articles by Mark Sullivan in the *Ladies' Home Journal* for January, 1906, should be read and submitted for general discussion. The revelations of swindling in the patent medicine traffic are therein so dramatically and so convincingly laid bare that much good to the community is sure to follow their general public discussion. As before observed, the joint meeting with the laity is one of the very best methods of popular instruction in matters pertaining to the public health. Every county society can readily adopt the method, and these timely topics of discussion furnish admirable opportunity to arouse public interest in the establishment of the custom.

Businesslike Methods Desirable

The conscientious physician must have due regard for the commercial side of his profession, because a poor physician, one who can not provide himself with the proper and necessary equipment, one who can not keep in touch with medical progress, is a dangerous man, and in order to equip himself properly and to keep abreast of the times he must make a satisfactory income. He should keep his accounts accurately and see that his bills are rendered promptly and every effort made to collect them, save in cases of destitution. People in general have more respect for a man who manages his affairs in a businesslike way than for one who is careless and shiftless. There is no more reason why the physician should give his patients a year or more credit, provided they are able to pay, than there is for the grocer or the butcher to do so. "Short

accounts make long friends." A course on business methods would be a very good thing for every county medical society to arrange, and undoubtedly much betterment would result, betterment not only to the physicians themselves, but to their patients and the community generally. With a harmonious profession and an active county medical society in which are all reputable physicians of the county, there will be fewer well to do families getting their medical attendance free, year in and year out. While commercialism, as such, has no part in the professional life of a physician, common sense or "horse sense" has, and it should be applied literally to the physician's business methods.

Benefits in Attending Medical Society Meetings

The *Southern Practitioner* says editorially

"Take a careful look at the membership of the American Medical Association during its entire existence for many years or of any state or local organization, and you will find enrolled therein the ablest, the most successful, the most prominent medical men of the particular time under consideration. Our busiest members have found time to participate in the meetings, if not every year, at least a great proportion of the time. Occasionally we have made overtures to professional men in regard to participating in society work, and have been met with the statement, 'We are too busy,' 'Could not spare the time,' yet a careful observation has forced the conclusion that such would have done better if they had never opened a medical book, and had devoted their time and talents to some other vocation. Unquestionably times do occur that professional or other duties will prevent attendance on a given meeting of a local or state society, and all can not attend the annual meetings of the national association, yet, if each member of the profession will but endeavor to participate in as many meetings of his local society, and occasionally attend a meeting of his state organization, he will find that the time so spent will be of more intrinsic value in the end than double the time spent in any other duty—yes, we regard this as a duty incumbent on any practitioner acting for the best interests of himself and those dependent on him for professional services. This may be regarded as a strong statement, yet it is the result of careful observation during more than forty years of professional life and we know will be substantiated by the leading medical men of this and all other enlightened and civilized countries.

"Much has been said about the benefits and advantages of organization. Its results are seen everywhere, and to no body of men is it so important, so necessary and essential, as it is to the members of the medical profession. Except in occasional instances of consultation their very work leads them to segregation and isolation. A daily duty of making visits as a duty renders to some extent social visiting irksome, and even though one is an omnivorous reader of standard and periodical literature he is apt to get into a groove he limited in his views and resources narrow in his observation—all of which is overcome by an occasional meeting with a collective number of others some his inferiors others his peers, and possibly a few his superiors in like work. By such association he adds his experience to that of others, and has the far wider experience of others added to his. Not all at one time, but a little at this meeting, more at another, and when he has established the habit—we are all more or less creatures of habit, of becoming a regular attendant at even local society meetings—it is astonishing how his entire methods, measures, manners, and life in all its technical details are broadened, advanced, and materially increased.

"By organization and regular meetings personal jealousies, petty bickerings, slanderous and scurrilous backbitings disappear and are supplanted by a broad and liberal ambition and emulation as to who can excel and who can add the more to the sum of professional knowledge, skill, and correct technique. Nor is it alone from the papers, essays and discourses thereon that we can and do derive a national benefit. Some of the most practical and valuable ideas and suggestions ever received have been obtained in the personal conversation with other medical men in attendance on a meeting. While many valuable ideas and thoughts have resulted from careful attention to the regular program yet some of far more value have been obtained in the social intercourse and conversation on assembling before the meeting as called to order and after its close."

Arizona.

SANTA CRUZ COUNTY MEDICAL SOCIETY—At the annual election of officers of the Santa Cruz County Medical Society, held at Nogales, February 1, the following was the result: President, Dr. Adolphus H. Noon, vice president, Dr. Harry W. Purdy, secretary and treasurer, Dr. Albert L. Gustetter, delegate to Arizona Medical Association, Dr. Ray Ferguson, and censor, Dr. Nicholas K. Noon, all of Nogales. This society was recently organized on the standard plan and begins its work with good promise for the future.

California

TEHAMA COUNTY MEDICAL SOCIETY—Physicians of this county met at Red Bluff, Dec. 6, 1905, and after an address on organization by Dr. Philip Mills Jones, San Francisco, secretary of the state society, organized a county society on the standard plan, electing the following officers: President, Dr. John M. West, vice president, Dr. Frank J. Bailey, and secretary, Dr. Frank L. Doane, all of Red Bluff.

PIKE COUNTY MEDICAL SOCIETY—Under the guidance of Dr. Mallie A. Clark, Macon, counselor for the sixth district, a county society on the standard plan was organized at Barnesville, Dec. 19, 1905, with an initial membership of 13, and the following officers: Dr. John C. Beauchamp, Williamson, president, Dr. John A. Corry, Barnesville, vice president, Dr. M. M. Head, Zebulon, secretary and treasurer, and Drs. George M. McDowell, Molena, John M. Anderson, Barnesville, and William M. Aycock, Williamson, censors.

Connecticut.

BRISTOL MEDICAL SOCIETY—The physicians of Forrestville, Plainville and Terryville have organized a medical society.

Georgia.

TALLAHERRO COUNTY MEDICAL ASSOCIATION—Physicians of the county met at Crawfordville February 6, and with the aid of Dr. W. W. Pilcher, Warrenton, counselor for the tenth district, organized a county medical association, with the following officers: President, Dr. Arthur C. Davidson, Sharon, vice president, Dr. John A. Rhodes, Crawfordville, secretary, Dr. A. H. Beazley, and censors, Drs. Lawrence R. Brown, Sharon, Power, and John A. Rhodes, Crawfordville.

SPALDING COUNTY MEDICAL SOCIETY—Physicians of the county met at Griffin, Dec. 8, 1905, and organized a county society on the standard plan with the following officers: President, Dr. Nicholas B. Drewry, Griffin, vice president, Dr. William M. Byne, Zetella, secretary, Dr. Joseph M. Thomas, Griffin, and treasurer, Dr. Thomas J. Collier, Griffin.

MCDUFFIE COUNTY MEDICAL SOCIETY—On January 16 the physicians of the county met with Dr. William Z. Holliday, Augusta, president of the Medical Association of Georgia, and Dr. W. W. Pilcher, Warrenton, counselor for the tenth district, at Thomson, and organized a county society on the standard plan. The constitution and by laws approved by the state association were adopted, and the following officers elected: Dr. Edward S. Harrison, Thomson, president, Dr. Sterling R. Gibson, Thomson, vice president, Dr. B. F. Riley, Jr., Thomson, secretary and treasurer, Drs. F. N. Ware, Thomson and Aaron J. Mathews, Thomson, and Dr. Daniel Story, Winfield, censors, and Dr. Z. Daniel Story, Winfield, delegate to the state association. Every physician in the county has joined the society.

Kentucky

NICHOLAS COUNTY MEDICAL ASSOCIATION—The physicians of the county met in Carlisle, January 26 for the purpose of reorganizing the county association. Dr. Robert J. R. Tilton, Carlisle, was elected president, Dr. Oliver S. Kash, Moorefield, vice president, and Dr. George B. Spencer, Carlisle, secretary and treasurer.

Louisiana

FRANKLIN PARISH MEDICAL SOCIETY—The physicians of Franklin Parish met January 19 at Jonesboro and organized a medical society in affiliation with the Louisiana State Medical Society, with the following officers: Dr. Mallory B. Culpepper, Hood's Mill, president, Dr. George E. Cannon, Jonesboro, vice president, Dr. J. A. Gaar, Jonesboro, secretary, Dr. Isaac M. George, Jonesboro, treasurer.

Maine.

MEDICAL ASSOCIATION OF KENNEBEC COUNTY—At the regular meeting of this association held in Waterville, January 24, Dr. Seth C. Gordon, Portland, delivered an address on organization giving the history of the work already done in that line through the efforts of the American Medical Association.

Michigan

ALLEGAN COUNTY MEDICAL ASSOCIATION—This association has been consolidated with the Kalamazoo Academy of Medicine

Missouri

LAWRENCE COUNTY MEDICAL SOCIETY—Twelve physicians of this county met at Mount Vernon recently and organized a county society, adopting the standard constitution and applying for a charter to the Missouri State Medical Association. The following officers were elected: President, Dr. James A. Harris, Mount Vernon; vice president, Dr. F. S. Stevenson, Aurora; treasurer, Dr. John P. Andrews, Marionville; secretary, Dr. Charles A. Moore, Aurora; and censors, Drs. Alphonso H. Madry, Aurora; Charles W. Shelton, Mount Vernon; and John B. Fleming, Aurora.

New Jersey

MERCER COUNTY MEDICAL SOCIETY—At a meeting of this society in Trenton, January 9, a complete report was made by the committee which had had in charge the consideration of the reorganization of the society on the standard plan.

North Dakota

TRAIL AND STOLE COUNTIES MEDICAL SOCIETY—The physicians of Trail and Stole counties met in Mayville, January 31, and organized a society on the standard plan with the following officers: Dr. Kristian A. Wadel, Portland, president; Dr. George McIntyre, Mayville, vice president; Dr. Edward C. Haugen, Hillsboro, secretary; and Dr. Archibald N. Currie, Hatton, treasurer.

South Carolina

FOURTH DISTRICT MEDICAL SOCIETY—Physicians of the fourth district met in Greenville, February 5, and organized a district society on the standard plan. Dr. J. Wilkinson Jervey, Greenville, counselor for the fourth district, was elected chairman, and Dr. Edgar A. Hines, Seneca, secretary.

Texas

SMITH COUNTY MEDICAL SOCIETY—The medical society of this county has changed its method of work, and on January 9 began a series of monthly postgraduate courses in medicine to which every physician in the county was invited. A program of clinical work for the day was arranged, cases and demonstrations being given in tuberculosis, heart diseases, diseases of the kidneys and diseases of the skin. This movement is a gratifying evidence of the beneficial results of the work done in Texas by Dr. McCormack in the fall.

Utah

CACHE VALLEY MEDICAL ASSOCIATION—A number of physicians from the Cache valley, including some from Preston and Franklin Idaho met in Logan City, January 24, and organized a medical association in conformity with the state association. The following officers were elected: President, Dr. Russell J. Smith, Smithfield; vice president, Dr. G. W. States, Franklin; secretary and treasurer, Dr. Heber K. Merrill, Logan; and program committee, Dr. R. J. Smith, Smithfield; Dr. Albert H. Cuntz, Hiram; and Dr. Emery, Preston.

Virginia

RAPPAHANNOCK VALLEY MEDICAL SOCIETY—The physicians of Fredericksburg have reorganized this society and have elected Dr. Joseph N. Barney, president, and Dr. W. Jeffries Chawning, secretary and treasurer. The first meeting of the reorganized society was held January 5.

Society Proceedings

JEFFERSON COUNTY MEDICAL SOCIETY

Regular Semi-monthly Meeting, held at Birmingham, Ala.,
Jan 22, 1906

The Gospel of Patent Medicines.

Dr. J. Ross SNYDER read a paper with the above title. He said that the medical profession had been accused by some ministers of harboring skepticism and infidelity. After denying the breadth of this charge, Dr. Snyder suggested that the attitude of many leading ministers toward patent medicines was so inconsistent with high standards of morality that physicians in turn might well speak skeptically of the ministers.

Many ministers lend encouragement to patent medicine frauds, some by testimonials, others by soliciting and publishing advertisements in the religious papers over which they have control.

In a recent issue of the *Alabama Christian Advocate* there were seventy advertisements in all, twenty of which were of patent medicines. In the *Alabama Baptist*, out of fifty-two advertisements twenty-two were of patent medicines. Dr. Snyder gave the names of the medicines advertised in both papers, but did not discuss in detail all of them. He thought this not necessary, for the fraud contained in many of the advertisements was too glaring to permit any plea of ignorance by the publishers of the papers. A few of the advertisements, however, he discussed in detail.

The proprietors of Dr. Lord's headache powders had admitted to Dr. Snyder that the preparation contained about two grains of acetanilid to the dose. The deleterious and sometimes fatal effects following the continued use of acetanilid were illustrated. Dr. Snyder suggested that the Alabama State Medical Association ought to father a bill prohibiting the sale of acetanilid except on a physician's prescription.

Physicians can only deal successfully with tumors and cancers by using the knife. "Dr." Bye, however, says he can remove any of these with oils. That any oil, potent enough to take the place of the knife in the removal of tumors and cancers, can be either "balmy" or "soothing" is a contradiction striking enough to be ludicrous.

Mrs. Winslow's soothing syrup advertisements found conspicuous space in both papers. The active ingredient in this syrup is opium. The physiologic action of opium, the susceptibility of children to the drug, and the opium habit were discussed. Soothing syrups were characterized as the most damnable of all nostrums.

"Mrs. M. Summers" advertised in one of these religious papers a preparation for the cure of all female troubles. Dr. Snyder showed that back of this advertisement is not a woman, but a pharmaceutical house which manufactures seventeen doubtful preparations. The advertisement is a deception meant to obtain from women their secret conditions, revealed in the belief that they are communicated to one of their own sex.

The "Marvel whirling spray syringe" was cited as another indecent advertisement. If the publishers of the paper do not know that this is sold chiefly as an instrument for preventing conception they are less discerning than a majority of their readers. It requires no stretch of the imagination to trace the downfall of a young girl to too close reading of a religious paper.

Some states and some secular papers prohibit the publication of obscene and indecent advertisements. It is a remarkable comment on Christian churchmen that they are less discriminating on this question of morality. Attention was called by Dr. Snyder to the inconsistency of any paper pleading for the temperance cause and publishing in the same column the advertisement of alcoholic patent medicines.

In reply to a subscriber's criticism of the patent medicine advertisements in a certain religious paper, one of the editors said in the paper that "there is plenty of good reading in the paper except those who were scenting around for something to object to, the patent medicine advertisements are only intended for people wanting something of that kind." This editor was compared to a minister who would build a brothel, a saloon and a church under one roof, and who would defend himself by saying that the church was big enough for all good people, and only those "wanting something of that kind" need get into the other two places.

After expressing the hope that the evil of "patent medicines" was becoming generally admitted, the ministers were invited to "come over on the Lord's side."

DISCUSSION

Dr. THOMAS D. PARKE sustained the general charge and stated that reform along this line had been earnestly urged on the press by the society more than once during the past ten years.

The editors of the two local religious papers had been notified in advance of the topic for discussion, and had been invited to be present. They were accorded the privileges of the floor and were invited to express themselves on the charges preferred.

REV FRANK W BARNETT, editor and proprietor of the *Ala bama Baptist*, acknowledged a realization of the impropriety of some advertisements carried by his paper, and stated that he was engaged in an investigation looking toward the possibility of discontinuing such, when apprised of the nature of the meeting. He further explained that he found himself bound by a three year contract to carry many of these advertisements until the expiration of this agreement, and would, when possible, discontinue the advertising of such nostrums as might be proved to be of a harmful character. Going into the methods of advertising agencies, as explained to him through their representatives, he stated that one department had charge of all "patent-medicine" advertising in all religious papers in the southern states, that the refusal of one or more advertisements by one or more papers in a state might nullify the contract for the agency or its representative, and that such arguments were adduced by said representatives as obligations on the papers to continue such advertising *in toto*. He confessed that he had failed to see the fraudulency or impropriety of certain advertisements which Dr Snyder believed to be self evident.

REV J D ELLIS, editor of the *Christian Advocate*, corroborated in the main the defensive plea offered by the preceding speaker. He cited one clearly indecent advertisement which had appeared twice in his paper, to be withdrawn, and believed Dr Snyder should be given due credit for such action, and for the expressed intention of discontinuing some advertisements when found possible.

DR. SNYDER stated his failure to discover reasonable evidence of intention or efforts toward a proper reformation and reiterated his charges.

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, Jan 24, 1906

The President, DR CHARLES K MILLS, in the Chair

SYMPOSIUM ON THE CARE OF THE INDIGENT INSANE

Public Care of the Insane

DR JOHN B CHAPIN, of the Pennsylvania Hospital for the Insane, likened the Philadelphia Hospital to an enlargement of the county poorhouses of early days, caring for the sick, poor, paupers, idiots and insane. It was stated that from a general observation the majority of the insane poor were, previous to the insanity, self supporters, rent payers, and in a sense indirectly tax payers. They were, therefore, entitled to relief and care. The first essential in their care was said to be an absolute divorcement of the insane from an almshouse with its associations and traditions. The new hospital should be in the country. There should be a qualified medical director, clothed with ample power, possessing a reasonable tenure of office and in no way subject to a so-called warden, who would soon or late stand for some political organization. Among some of the results realized by the chronic class of patients would be the formation of orderly habits of living and occupation afforded by the opportunities of a farm and a large community, decided improvement in the mental condition of the whole number and the restoration of many to their families.

Whether this work should be undertaken by the city or state was considered immaterial, provided it was well done. If undertaken by the state there will be a reasonable guaranty that a higher standard of care would be maintained and the institution be free from the demoralizing influences of politics. Accommodation should be provided for at least 1,800 patients, together with the necessary officers and employes and a scheme agreed on to meet the inevitable annual permanent increment. The plan of erecting plain, substantial blocks or detached buildings supplemental to an administration building, which

could be added to from time to time, furnishes a suggestion for the scheme which is now proposed. The detached blocks furnish extraordinary facilities for classification of special cases and reduces the danger of destruction by fire to a minimum. Any plan presented should permit of additions and expansion as necessary.

Assuming the removal to the country of the pauper population, Dr Chapin believes there should be provided on the present site a hospital for the reception of emergency cases, acute cases of delirium from any cause and persons arrested requiring temporary detention on the sudden outbreak of insanity. Many such cases, he believes, would be discharged without transfer to the colony. This institution should be a hospital in name and fact, equipped for the best hospital care of acute cases.

The adoption of some such plan as outlined, Dr Chapin believes the only one which will solve the present problem of the disposition of the large number of chronic insane persons now in the Philadelphia Hospital. Each patient should have a proper allotment of cubic and superficial space, and a dietary should be established to meet the wants of the able-bodied as well as the sick and feeble. There should be organized a medical service of a high standard for the emergency wards. This, in Dr Chapin's opinion, the medical profession has a right to demand as citizens and sympathizers with a distress that may afflict any one in the community. If this is well done he does not think tax payers will question the expenditure. To do less than is proposed he believes will result in the gradual degeneration of the whole service, as has been shown in every municipality where the attempt has been made to care for the insane poor apart from state supervision and control.

State Care of the Insane in New York.

DR FREDERICK PETERSON, ex president of the New York Commission in Lunacy, in reading this paper said that it was a singular circumstance that a stranger should speak to Philadelphians on the humane care and treatment of the insane, for Philadelphia had been the first city in the Union to preach the gospel of sickness for these unfortunates and the first to practice the doctrine. More than 150 years ago Philadelphia established a hospital for the insane, which was a long step in advance of that period. Dr Rush, of Philadelphia, was the Pinel of America. He abolished whipping as a remedial measure for insanity and discarded manacles and chains.

Dr Peterson reviewed the progress of the insanity legislation in the State of New York, the first step of which was taken fifty years subsequent to the establishment of a hospital for mental disorders in Philadelphia. By 1896 all of the indigent insane of the State of New York had been placed under state care. The fourteen state hospitals and the twenty three private retreats for the insane are all under the jurisdiction of the State Commission in Lunacy, consisting of a physician, a lawyer and a business man. These private retreats are supervised and inspected, and licenses may be revoked on failure to comply with the regulations of the commission. This body has not only supervision over the state hospitals, but the entire management of the expenditures for the maintenance of the patients and the construction of new buildings. The old idea of separate provision for the acute and chronic patients was long ago abandoned.

A summary was given of changes in contrast to the methods employed in the county management. Among these were the establishment of training schools for nurses in all of the state hospitals, a central pathologic institute or school of psychiatry at Ward's Island in the New York City asylums, to which all the assistant physicians from the various hospitals of the state go for instruction in the latest scientific methods of study and treatment of the insane. This is under the directorship of Dr Adolf Meyer. Most of the hospitals have staffs of consulting physicians from neighboring cities. A woman physician, a salaried dentist and an oculist are required at each hospital. Each hospital is thoroughly equipped with everything needed in medical and surgical instruments and appliances. Emergency commitments now in force give speedy access to hospital care. Restraint by means of strips etc., has been almost abandoned and some wards have unbarred windows and doors. Occupa-

tions for the patients have multiplied and the work of the able-bodied in shops, gardens, fields have monetary value. Wards and rooms have been made attractive and religious services are held by salaried chaplains. Special tuberculosis hospitals have been constructed at several of the county asylums, and several of the hospitals have small colonies at a distance for the care of convalescent patients in change of air and scene.

New York State has appropriated \$300,000 to construct a psychopathic hospital on Manhattan Island to act as a distributing center for the insane of all classes. It was urged that every great city should have emergency pavilions in connection with the hospitals to which patients supposed to be insane can be at once taken, not only for observation, custody and diagnosis, but for immediate treatment.

DISCUSSION

Dr. W. M. J. COPLIN thought that no large city could properly care for the insane and the indigent not insane in its corporate limits on account of the value of the ground and because of the higher cost of maintenance than in the country districts. The general influence of the outlying districts, he felt, was better than that of the city. He favored the establishment of detention or observation wards similar to those in New York for the treatment of cases curable within a reasonable time and for cases in which careful study might offer better methods of treatment. Such quarters should accommodate from 200 to 300 patients and should be exceedingly elastic to prevent possibility of overcrowding. They should be well officered with eight or ten volunteers, and in addition men of experience and competent to teach the volunteers. Above these there should be a consulting or directing staff, composed of men of eminence. He would have the tuberculosis cases treated separately from those not tuberculous. He regarded the present unfortunate condition of the insane poor of Philadelphia largely the result of an increase in numbers, which had exceeded the growth of facilities, and said that it was difficult to impress on governing bodies who distribute the public funds the fact of the increase of numbers of the insane poor and the advances made in the treatment of insanity.

The question of hired help was also considered. Intelligent help would naturally work in those institutions in which the environment was in accord with their own individuality, and the city institution would probably receive what was left. The point to be realized by the medical profession was that law-making and appropriating bodies would give that which was desired if the matter were left before them and the urgency shown. It was well to drive home to the people the necessity of such reforms and have their sympathy.

Dr. F. X. DREYER said that specific and practicable plans should be outlined, and believed that the psychopathic hospital which should take the place of detention wards was a necessity and a feasibility. The stigma of a commitment also by this means would be obviated. He would favor caring for the insane of the city at Norristown, where there are ample grounds for buildings, and, because of its ready access from Philadelphia, patients could be readily transferred from the psychopathic hospital. He expressed his hearty accord with the idea of convalescent wards and colonies if they be proven practicable. He thought all were painfully impressed with the difference in the care of the insane of Philadelphia and that of New York, and felt that it was largely dependent on the profession to make known the wants of the insane and to maintain the agitation until something definite shall be achieved. He realized the difficulty of securing the highest class attendants at the almshouse, but thought it might be overcome by the establishment of training schools. He would favor the establishment of a training school for men similar to that in New York who would take charge of the male wards in the hospital and in the psychopathic department. The pupils should receive little or no pay and leave at the end of a definite time with a definite earning power. To get along with the no-restraint method there would be a larger number of attendants and better paid attendants required. He agreed with Dr. Coplin that the authorities would grant the improvements asked for by the medical profession.

Dr. CHARLES W. BURR said that he knew of no new argu-

ment for a change of conditions at Blockley, that it was a perfectly well-known fact that the insane department of the Philadelphia Hospital and, indeed, of Blockley itself, was not an honor to the city of Philadelphia. It was also known, or ought to be known, that it was the fault of no one but the citizens of Philadelphia. They were blameworthy, first, because they do not like to spend money, and, second, because until very recently they were perfectly willing to be robbed, so long as the money was not taken out of their individual pockets. The one way to straighten out the difficulty was to take the care of the insane poor entirely out of the hands of the city. He favored the establishment of the psychopathic ward in which cases of acute mental disease could be taken at once.

Dr. WILLIAM G. SPILLER said that no one could doubt the needs of Blockley, that until within the last few weeks patients had been sleeping on the floors. The subject which Dr. Coplin had brought before the public was not a new one. He recalled the hopefulness entertained by many of the staff for a few years previous when looking about for a site, which efforts, however, had fallen into the background, and it was not surprising that a pessimistic view had overtaken some. Personally he was delighted to know of the hopeful outlook held by Dr. Coplin. In listening to Dr. Peterson's paper he felt the difference existing between New York and Pennsylvania in the care of the insane. Reference was made to the high class of work done by Dr. Meyer on Ward's Island. He asked that Dr. Peterson would describe the non-restraint system. It had been his misfortune to have a patient jump out of a window, this, he felt, was also likely to occur among those slightly insane.

Dr. WILLIAM PICKETT believed that the immense advance in New York State in the care of the insane was largely due to the fearless and energetic work of Dr. Peterson. During the ten years of Dr. Pickett's association with Blockley he had seen several plans developed, all of which had failed. The present movement he believed would succeed under the management of Dr. Coplin. He felt strongly that it was an ordinary commonsense proposition that Philadelphia should have an emergency ward for the insane. In 100 admissions to the insane wards he had found that thirty patients recovered in two months or less, twenty-four in six weeks or less and that about sixteen recovered within a month. All of the trouble, expense and stigma—if there be such—of a commitment could be thus saved by the emergency ward or hospital. Such a ward he believed in addition to lessening the number of chronic insane in the state hospitals, would diminish the tendency to recurrence of insanity, and above all, would save from an insane asylum many of the cases of puerperal insanity, and confusional insanity in terminal Bright's disease, pneumonia and other physical disorders. In such a psychopathic hospital there should be accommodations for at least 300 patients.

Dr. ALFRED GORDON emphasized strongly the necessity of first instructing the general practitioner in the psychiatry. Should the hospital for the insane be removed from the city, he thought there would be removed the practical means of giving this instruction, and that the future general practitioner would know still less than is known at present of the science and treatment of insanity. He said that in France the study of insanity was made one of the branches in the general curriculum, and that there the general practitioner was able to talk with the laity in an intelligent manner if the necessity arose. He believed that the general hospitals should have a special or psychopathic ward for receiving patients who in the course of pneumonia or other infectious disease might develop delirium. Regarding the insane department of the hospital he would suggest that the staff of alienists take full charge of it, each member of which staff should give at least six months attendance. In addition to this a large number of resident physicians should be appointed. He would place the supervisory tendency in the hands of a layman who would work under the absolute direction of the staff. The psychopathic ward should also be under the full charge of the staff of alienists, for cases even slightly confused at the beginning should be under the care of eminent men.

Dr. HAWK thought that the state should have immediate care of the city insane. He said that those in charge at

Blockley were greatly handicapped by insufficient funds, and that for the more than 1,800 patients there was a totally inadequate number of physicians. The work of the internes as alienists he regarded as practically useless. At times 15 to 20 cases were admitted in a day. Only within the last month had the full quota of assistants been allowed by councils. Last year there had been paroled and discharged over 12 per cent. of the whole number of patients under treatment. In the majority discharged as recovered it was meant that they were possibly as well as they had been for some time prior. In 4 or 5 per cent there was absolute recovery. The death rate had been 13 per cent plus. This was due to the fact that many of the cases are of senile dementia with a large proportion between the ages of 70 and 100 years. Such cases had been transferred to the insane department because there was no other means to take care of them. Dr Hawk thought the average for other cases would compare favorably with those of many of the New York asylums, and said that every endeavor had been made to keep the standard at Blockley high, but that the means had been entirely inadequate for the purposes desired.

Dr A. R. MOULTON feared the idea would go out that the medical work at Blockley was not well done. He had, however, had opportunity for observing the work at Blockley and could say that the medical work in the insane department was most excellently done, and this was emphasized by the fact of the very large number of patients and the small number of medical attendants. He felt it a duty, as it was also a pleasure, to state that Dr Hawk had done most excellent work in the Philadelphia Hospital.

Dr WILLIAM S. WADSWORTH referred to the housing of the insane, pointing out that all could not be housed in the same manner, some could not be put into tents, the working insane should not be housed with the feeble bodied, nor the maniacal with those only temporarily insane. Tents were regarded as undesirable because of the difficulty of keeping them clean. He favored the use of pavilions with the buildings running north and south and placed sufficiently far apart that each would get the east and the west sunlight on the sides of the buildings. There should be connection with the main hospital and as well the ability to isolate any ward at a moment's notice.

The matter of occupation he regarded of extreme importance. There should be something for them to do which would abstract that moral and mental tension which was their destruction. Without a due regard to this element the subject was only partially covered. As medical men, he thought the profession was prone to think principally of the sick insane. There should be something to keep the patient from thinking of himself and so sitting in the darkness of their own minds.

Dr PETERSON approved of Dr Wadsworth's suggestions of occupation for the patients and said that the colony system included this. He thought the effort in Philadelphia should be to establish the psychopathic hospital in the city for emergency cases and then, as soon as possible get all the other insane into the country. He suggested that the passage of a law providing for the maintenance and equipment of such an institution on condition that Philadelphia furnish the land and erect the building might be helpful in the project. In New York such a law had been passed in securing their psychopathic hospital

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Arteriosclerosis

Arteriosclerosis, according to Sir James Barr, in the *British Medical Journal* is a disease which causes the death of more men in the prime of life and vigor of manhood than any other. The etiologic factors which enter into the cause of this disease are lead, alcohol, excessive nitrogenous foods, age, sex (being more common in men), physical strain which is a potent factor

in causing high arterial tension and cardiac hypertrophy, leading to early degeneration, as shown in athletes and in laborers. Cold is also regarded by the author as an agent which raises the general blood pressure sufficiently high to produce general arteriosclerosis by long contraction of the superficial vessels and their vasa vasorum. Worry, anxiety and all forms of mental strain are also powerful factors in the production of this condition. He speaks of Americans as being more liable to this disease than natives of other countries, stating that at the age of 60 the majority of Americans are old. In the treatment of this disease the first and important thing to be considered is diet. Too much nitrogenous food should not be consumed. In this connection he refers to the work of Professor Chittenden on the physiologic economy in nutrition. Although he recommends diet of low proteid value for healthy adults and for those suffering from arteriosclerosis, for growing individuals whose tissues are not fully developed a more liberal allowance of nitrogenous substance should be given. Not only should the amount of food be considered, but the mastication should be slow and the food should be thoroughly divided. A good rule which is laid down in this respect is never to eat until you have an appetite, then to eat slowly, to masticate thoroughly, and never to eat to repletion. Exercise should be prescribed to suit the different individuals, according to age and physical development.

Regarding the administration of medicines, he makes the statement that there are two classes of drugs which he never, or very seldom, prescribes, namely, digestive agents and hypnotics, for if a man can not sleep or can not eat there is something wrong with him and he should be treated and not palliated. As in this condition the man eats too much, his digestion fails him, the insomnia depends on high blood pressure, consequently the cause in each instance must be removed rather than the symptoms treated.

The thyroid preparations are spoken of as very useful in the treatment of arteriosclerosis, as it has been shown that they dilate the arteries. Iodin is often more valuable than thyroid extract, as its metabolic effects are attained by a stimulating action on the thyroid gland. The author prefers the tincture of iodine and the syrup of iodine and tannic acid to the more stable iodids. Adrenalin is, as a rule, injurious in arteriosclerosis, but when combined with thyroid extract or iodine it occasionally does good by maintaining arterial tone and stimulating the heart.

THE CITRATES

The citrates, according to A. E. Wright, have a decidedly decalcifying effect on the blood. At first they lessen the coagulability, but after prolonged use this is increased, and is due, according to Wright, to the fact that the citrates dissolve the lime salts out of the tissues.

THE BENZOATES

The benzoates have been favored remedies with this writer, especially in that form of arteriosclerosis associated with kidney involvement. Uremic convulsions cease under their free administration, and they are said to convert uric acid into the more solid hippuric acid and to eliminate other purin bodies. Acting similarly to the salicylates, they have a cholagogue action.

THE SULPHATES

The sulphate and the hyposulphite of sodium, sulphate of magnesium and numerous purgative mineral waters have a good effect in clearing out the intestinal tract and in lowering blood pressure.

THE CHLORIDS

The chlorids should be limited, as they are depressor agents. Calcium chlorid should not be administered unless there be some definite indications for its use, such as a severe hemorrhage or cardiac failure. Sodium chlorid should only be taken by gouty individuals and in limited quantities. As to other depressor agents, the hippurates of ammonium and sodium are recommended. The nitrites are valuable agents in cases of emergencies, but their effects are too rapid to render them desirable for constant use.

Corneal Ulcers.

Lawson, in an abstract in the *Medical Press*, states that corneal ulcers may be relieved by the treatment with quinin.

Medicolegal

Vermont View of Compounds Containing Alcohol

The Supreme Court of Vermont says that, in the case of *State vs Costa*, where the main question was whether the defendant kept a certain "malt extract" to sell for medicinal uses only, or whether he kept it to sell for use as a beverage, the trial court permitted the actual amount of alcohol and of the other ingredients of the extract to be shown, and properly did so, for the character of a liquid containing more than 1 per cent of alcohol may be such that its use as a beverage is impossible, as is the case with some virulent poisons. The mere fact that a liquid can be and is swallowed does not make it a beverage. So it must be said, in the case of extracts, tinctures, essences and compounds having a legitimate use for medicinal, culinary or toilet purposes, that the mere presence, as a solvent, preservative or otherwise, of more than the proportion of alcohol named in the statute, does not make the preparation one to which the statute applies. In respect to such articles the inquiry is not simply whether they contain more than 1 per cent of alcohol, but there is the further inquiry whether or not the articles are sold to be used as a beverage. In respect to the sale of such preparations the intent governs. If there is no intent to sell these preparations for other than legitimate uses there is no offense. If, however, a preparation is capable of being used as a beverage, and is sold or kept for sale with the purpose, intent or understanding that it is to be used as a beverage, then, if it contains more than 1 per cent of alcohol, an offense is committed.

Injurious Substances in Bottles—Fear of Death

The Supreme Court of Georgia holds, in the case of *Watson vs Augusta Brewing Company*, that a manufacturer who makes and bottles for public consumption a beverage represented to be harmless and refreshing is under a legal duty not negligently to allow a foreign substance which is injurious to the human stomach, such as bits of broken glass, to be present in a bottle of the beverage when it is placed on sale, and one who, relying on this obligation and without negligence on his own part, swallows several pieces of glass while drinking the beverage from a bottle, may recover from the manufacturer for injuries sustained in consequence. The court says that the case of *Blood Balm Co vs Cooper*, 83 Ga., 457, while differing somewhat as to its facts, furnishes strong reasons to support the principle announced. The composition of patent or proprietary medicines is usually shrouded in mystery, and it is generally understood that many such remedies contain ingredients which, if taken in sufficient quantities, will produce injurious results on the person taking them. If, then, one who buys a patent medicine may rely on the obligation of the manufacturer not to place therein ingredients which, if taken in the prescribed doses, will injure his health, certainly the purchaser of an alleged harmless and refreshing beverage should have the right to rest secure in the assumption that he will not be fed on broken glass. Moreover, the duty not negligently to injure is due by the manufacturer in a case of the particular character of the one under consideration, not merely to the dealer to whom he sells his product, but to the general public for whom his wares are intended.

A somewhat peculiar ground of demurrer, the court further says, was one advanced in this case which sought to place on the plaintiff the burden of showing "the size and kind of glass" that he swallowed. Courts have gone far in requiring particularity of pleading, but this court is not aware of any rule which would require a man who has unconsciously swallowed several pieces of glass to make a note of the shape, size, color and character of the pieces after they have been removed from his stomach, in order to describe them in bringing suit to recover from the one who is responsible for his having swallowed them.

especially those large ulcers involving the true cornea, and which are not very infectious, marginal ulcers, scalloped and ring ulcers, all infiltrating and infective ulcerations which are not undermining the edges, neuropathic ulcers. He does not recommend quinin in the treatment of the small superficial ulcers, which usually heal readily under simple and less irritating lotions. The form of quinin solution he recommends is the following combination:

R Quininæ sulphatis gr iv 20
Aque dest ʒi 30

M Sig. The eye is to be thoroughly douched with the solution for five minutes by means of an ordinary eyebath, and repeated four or five times a day.

To the foregoing combination the least possible amount of dilute sulphuric acid should be added to dissolve the quinin salt. Atropin should be instilled twice a day and a bandage applied.

Treatment of Cystitis

Dr Howard A Kelly, in the *Dominion Medical Monthly*, states that in the etiology of cystitis the important predisposing factors are localized congestion, traumatism, retention of urine, reduced health. The exciting causes are the various organisms which have been found in this condition. The clinical forms, according to the writer, are the catarrhal, desquamative, ulcerative, granular, papillary and bullous edema. In the treatment of this condition he states that three important factors should be considered. First, a carefully written analysis of the case, including a description of the appearances in the bladder. Second, a well defined course against the disease, third, great patience on the part of the physician and the patient. In the prophylactic treatment he speaks of not only thoroughly sterilizing the catheter before introducing it, but at the same time cleansing the internal meatus. Further, when there is reason to fear cystitis, and always when the catheter is used, it is well to use hexamethylenamin (urotropin) for a few days in from 5 to 10 grain doses three times a day as a prophylactic. He states that cystitis will rarely occur if this precaution be taken.

The systematic treatment includes medicines by the mouth, injections into the bladder, direct topical treatments of the vesicle walls and surgical treatment, including incision of the bladder. The patient should be put to bed, with complete quiet, the diet should be regulated, tonics administered, with the proper regulation of elimination by the bowels, and massage and baths. As to medicines by the mouth, he recommends large quantities of water. Hexamethylenamin (urotropin) in from 5 to 10 grain doses is of great value in the more recent cases, especially when there is a tendency to alkaline changes. When the urine is too acid, potassium citrate is of value. Boric acid is useful when it is desired to render the urine acid. The administration of the fluid extract of cornsilk (*Zea mays*) in teaspoonful doses will not infrequently have an ameliorating effect on the symptoms. Irrigation, however, is the most important means of treatment of this disease. The simple daily cleansing of the bladder is of exceeding benefit, and by this means he speaks of bringing some very rebellious cases to a successful end. He speaks of the surgical treatment of this disease as consisting of minor surgery in some cases, while major surgery must be resorted to in others.

Rheumatism

The following combinations are recommended by the *Journal of Medicine and Science* for the local treatment of rheumatism.

R	Acidi salicylici	ʒi	4
	Lanolini	ʒv	20
M	Ft unguentum	Sig	Apply locally to the affected joint
	Or-		
R	Extracti belladonnæ	gr v	30
	Acidi salicylici		
	Sodii salicylatis, ʒi	gr ʒv	15
	Lanolini		
M	Ft unguentum	Sig	Apply locally
	Or		
R	Ichthyoli	ʒi	4
	Lanolini	ʒi vi	8 24
M	Ft unguentum	Sig	Apply locally

On the question of whether or not the plaintiff in this case could recover for mental suffering growing out of his injury, and, if so, to what extent, the court says that it is a familiar principle that, where a physical injury has been sustained, the injured may recover for mental suffering caused by or growing out of his bodily hurt. One may not recover, however, for mental suffering which is not reasonable or which is merely fanciful. It can hardly be disputed that a reasonable fear of death constitutes mental suffering of a very keen sort. It is not unreasonable, this court thinks, for one who has swallowed several pieces of glass to entertain a very vivid and poignant apprehension of an untimely end, and the mental anguish caused by this dread may constitute an element of damage in a suit for damages on account of the physical injury. But after the glass has been removed from his stomach and he is apparently restored to his former condition of health and vigor, his fears, so far as a damage suit is concerned, should cease. He may not continue for an indefinite period to vex his soul with dread on account of having been "cut on the inside" and hold the defendant liable for his apprehensions.

Admissibility of Evidence of Experiments by Experts

The Supreme Judicial Court of Massachusetts says that one of the questions claimed at the trial of the defendant in the homicide case of *Commonwealth vs. Tucker* to be material was whether the azygous vein of the victim was severed by the stab in the back, the commonwealth contending that it was and the defendant contending to the contrary. One witness, a medical expert, called by the defendant, on direct examination testified at first, in substance, that while it was barely possible that the vein was thus severed, yet it was highly improbable, and finally said that to him it seemed impossible. He was then asked whether he had made any experiments for the purpose of "ascertaining that opinion," and in reply he said that he had. He was further asked whether or not he had made experiments on a body approximating the size of the body of victim in this case described by him, and he said that he had. But, objection being made, he was not allowed to show the nature of the experiment. This, the court holds, was correct.

Whether the details of an experiment not otherwise material may be shown as having some bearing as substantive evidence on a question on trial, the court says, depends on the nature of the question and that of the experiment. If, for instance, the question be with reference to the operation, chemical or otherwise of some natural force which acts uniformly under any given conditions, and the conditions under which the experiment is made are shown to be so similar to those which existed in the case on trial that the court can see that the experiment may be really of assistance to the jury, the details of the experiment may be put in as independent evidence. The true ground of admitting the details and result of such an experiment is that it may be of assistance, but the question whether it may be or whether it may or may not lead to too many collateral questions, is largely within the discretion of the court. It is manifest that in view of the nature of the question in dispute here, namely, whether the azygous vein was cut by the stab in the back, taken in connection with the difference necessarily existing between the conditions in the case on trial and those under which the experiment was performed and the obvious difficulty, if not impossibility, of ascertaining whether such difference had any material effect on the result, the court was fully justified in excluding the experiment or any inquiry into its nature.

It was argued, however, that inasmuch as an expert has the right to explain the reasons for his opinion, it was competent for the witness to state this experiment in detail, to fortify his opinion. But, the court says, it is settled in Massachusetts that the rule allowing an expert to give the reasons for his opinion has its limitations, and one of them is thus stated: "A party can not put in evidence incompetent facts under the guise of fortifying the opinion of his witness, even if the evidence might have been properly admitted on the cross examination of the expert." The experiment in question being incompetent as substantive evidence, the court properly excluded all evidence as to its nature, even whether made on a dead or a living body, although offered under the guise of a reason for the opinion of the witness.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Medicine, Philadelphia.

February 10

- 1 *Arteriosclerosis as a General Disease. A Stengel, Philadelphia.
- 2 *Asthma. J. R. Arnell, Denver, Colo.
- 3 The Problem of Psychiatry in the Functional Psychoses (Concluded.) E. Cowles, Boston.
- 4 *Treatment of Mediastinal Carcinoma with the Roentgen Rays. G. E. Pfahler, Philadelphia.
- 5 *Case of Cerebrospinal Meningitis. G. C. Merriman, Scranton, Pa.
- 6 Edibility of Animal Spleens. E. T. Williams, Boston.

1 **Arteriosclerosis as a General Disease**.—Stengel says that three stages of the disease may be recognized. 1 A preliminary one difficult of recognition in its beginnings and confusing to the clinician in his first efforts to distinguish what part the etiologic factors have contributed to the symptom complex and what part has resulted from the arterial disease itself. 2 A middle period, during which the arterial disease is easy to recognize, but in which secondary organic changes have a rôle of variable importance. 3 A final stage of failure of circulation, organic failure and terminal infection. In the more advanced stages of arteriosclerosis the disease may be classified under the following headings: 1 The thoracic (a) cardiac or disturbances incident on special involvement of the coronary arteries, (b) aortic, referring not merely to aneurism, but also to a sclerotic and calcareous roughening without dilatation but causing embarrassment of cardiac action. 2 Abdominal (a) renal, manifesting itself in the symptoms of chronic interstitial nephritis, (b) intestinal as evidenced by atrophy of the mucous membrane, tendency to chronic colitis, etc., (c) pancreatic, difficult of recognition, often, however, active in diabetes, (d) hepatic, occurring as cirrhosis, (e) cerebrospinal—most numerous and varied, and (f) arteriocapillary, manifested in moderate circulatory disturbances.

2 **Asthma**.—Arnell reports six cases, illustrating a variety of causes and treatment. The pathology is summed up as follows: 1 A vulnerable mucous membrane. 2 Abnormally sensitive nerve centers. 3 An external irritant or exciting cause. 4 The presence in the body of known and unknown substances which are toxic to patients susceptible to asthma.

4. **Roentgen Ray in Mediastinal Carcinoma**.—Pfahler reports six cases in which carcinoma of the mediastinum developed secondary to carcinoma of the breast. All the patients had been operated on previously. Three of the six patients have apparently recovered, though they are still under observation. In none was any bad result noted.

5 **Cerebrospinal Meningitis**.—Merriman believes that the enormous percentage of mortality in pneumonia among children has been due, in many instances, to unrecognized meningitis. He says that in every case of acute lung involvement in children a careful examination should be made of the spine and neck and eyes. Pressure over the spine and at the base of the skull will bring out the tenderness in the cervical and dorsal regions. Examination of the eyes will sometimes, not always, show some inequality in the pupils, and the presence of photophobia.

Medical Record, New York.

February 10

- 7 *New Method of Testing the Functions of the Digestive Apparatus. M. Einhorn, New York.
- 8 *What Is the Climacterium? S. W. Bandler, New York.
- 9 Pneumonia. H. B. Weaver, Asheville, N. C.
- 10 Modern Conception of Matter. W. D. Horne, Yonkers, N. Y.
- 11 Case of Tympanic and Mastoid Cholesteatoma. Extracranial Abscess. Sinus Thrombosis. D. M. Barstow, New York.
- 12 *Notes on the Cerebrospinal Fluid. N. A. Pashayan, Kings Park, N. Y.
- 13 *Surgical Rings. H. A. Shaw, Seattle, Wash.

7 **New Method of Testing Functions of Digestive Apparatus**.—Einhorn attaches solid foodstuffs to glass or porcelain beads, by drawing them through the opening in the bead and tying them on with silk thread. Examination of the beads found in the feces will reveal the indigestible substances, while those which are digestible will have disappeared during their course.

through the gastrointestinal tract. In order to test the work of the stomach alone, a thread is attached to the beads, which are placed in a gelatin capsule. At the end of from four to six hours the beads are withdrawn. By these two methods both the digestion in the stomach and in the bowel may be judged. Finhorn sums up the results of his experiments as follows: In healthy individuals catgut and fishbones are digested in the stomach, whereas boiled or raw meat (beef), raw chicken skin, and raw as well as boiled potatoes, do not disappear altogether in this organ. The muscles show a swelling and loosening of the fibers. Raw muscle fiber and chicken skin disappear in the intestines, tendons remain undigested. Raw potatoes show a varying condition, sometimes disappearing entirely, sometimes going through unchanged. Boiled potato usually seems to be digested in the bowel, but the skin of the potato raw or boiled remains unchanged. Fats with a very high melting point, such as lard, are not absorbed in the intestine, suet and mutton fat are digested in the bowel. Fishbone is not changed in the intestinal tract. If the intestinal functions are normal albumin (raw meat), and starch (potato), boiled two minutes and mutton fat will disappear during their passage through the digestive tract. Disturbances of these functions may be recognized by the reappearance of food substances attached to the beads. Raw thymus has been used to test the pancreatic function. When the intestinal and pancreatic functions are intact the thymus will disappear.

8. **What Is the Climacterium?**—Bandler states that although the menopause is generally considered an essential evidence of the climacterium, this is not true. Another erroneous but common view is that after hysterectomy the annoying symptoms of the climacterium are absent if the ovaries be left behind. In point of fact annoyances of the same nature, often combined with scanty menstruation and with the other evidences of ovarian insufficiency, are often seen in women who have not been operated on, in women at the menopause, or during the climacterium, and even in women who are not near the menopause age. Bandler thinks that we are justified in considering the relative over-secretion of the thyroid in these patients as the pathologic basis, and the probabilities are that ovarian insufficiency means relative hyperthyroidism. The symptoms of diminished ovarian secretion and those of hyperthyroidism are enough alike to warrant the opinion that they are one and the same.

12. **Notes on Cerebrospinal Fluid**—Pashayan has made a cytologic examination of the spinal fluid in a number of patients, with the object of determining the constancy of lymphocytosis in the cerebrospinal fluid in paresis as well as in other mental affections. Among 37 cases of general paresis a marked increase of lymphocytes was seen in 16, a moderate increase in 5, the results were doubtful in 3, and negative in 3. Lymphocytosis was absent in 7 chronic alcoholics, in 6 old syphilitics, in 25 epileptics, in 13 hebephrenics, in 8 katatonics, in 7 manic depressive cases, and in 7 paranoid states.

13. **Surgical Rings**—The object of Shaw's device is to enable the operator to use his fingers instead of forceps, needle-holders, etc. The device consists of a pair of steel rings with a small segment cut out on the inner (middle finger) side, and a denticulated plate on the outer side (thumb side). These rings fit on the second phalanx of the index finger of each hand. The first and most important use of the ring is in tying sutures and ligatures. In this case the main advantages are that it is ready for instant use and does not weaken the suture or ligature material, as forceps do, and also avoids cutting of the fingers and consequent infection. It enables the operator to separate adhesions with the fingers, without the aid of forceps, gauze, etc., with the least amount of injury to the tissues, and is especially valuable in separating the hernial sac from the cord, and in varicocele. In grasping and retaining tissues, it is much handier and produces less injury than tissue forceps. In the manipulation of the needle it is valuable both as a holder and as a guide in directing the point of the needle among important structures. Lastly, it enables the operator to handle, with ease, slippery viscera, as the intestines.

New York Medical Journal February 10

- 14 *Case of Cerebrospinal Meningitis Indicating that It May Be of a Contagious Nature H A Hare Philadelphia
- 15 Should Education on Sexual Matters Be Offered to Youth E L Keyes, New York
- 16 *Education in Sexual Subjects F C Valentine, New York
- 17 Dietetic Treatment of Chronic Diarrheas M Elmhorn, New York
- 18 *Surgery of the Thyroid Gland M Ballin, Detroit, Mich
- 19 Displeasing Results of the Mastoid Operation J A Stucky, Lexington, Ky
- 20 Contribution to Our Knowledge of the Polioencephalitis Superior (Wernicke Type) J R Hunt, New York
- 21 Sanatorium Treatment of Pulmonary Tuberculosis, with Brief Description of Work and Results at the State Sanatorium, Ray Brook N Y M P Burnham Ray Brook N Y
- 22 Early Diagnosis of Gastric Carcinoma H Weinstein, New York

14. **Contagiousness of Cerebrospinal Meningitis**—Hare cites a case of cerebrospinal meningitis of unusual severity. In less than thirty-six hours the patient received over 25,000 units of diphtheria antitoxin. The patient died of circulatory and respiratory failure about forty-four hours after the beginning of his illness. Two days afterward Hare was called to see the physician who had had charge of this patient. He found him with slightly injected conjunctivæ and suffering from a condition of discomfort in the back and legs, which did not, however, amount to pain. No rigidity was present in any part of the body. On the evening of the same day this second patient was unconscious and in violent convulsions, accompanied by attempts to vomit which were prevented by the tightly clenched jaws. The Kernig sign was present, the hands were clenched with the thumbs in at the palms, the head was rotated sharply to the right, and there was also a conjugate deviation of the eyes, to the right, with fixation of the eye balls. The physician died about eight hours after the development of distinct meningeal symptoms and nineteen hours after his first symptoms developed. Hare considers these two cases of interest not only because of their violence, but also because it seemed that the infection was transferred directly from the first case to the second. Another point of interest is that the first patient had visited four days previous to his illness in two cities which at that time were the seat of an epidemic of cerebrospinal meningitis. Still another point of interest is that a medical student who helped take care of the patient developed a violent tonsillitis, with fever and pain throughout the body. Hare himself suffered from a chill, fever of 102, and severe aching in the neck, back and limbs four days after seeing the first patient and within twelve hours of seeing the second one.

16. **Education in Sexual Subjects**—Valentine summarizes his paper as follows:

- 1 Sexual physiology and hygiene need not be formally taught girls save in the exceptional instances in which the genitalic impulse is prematurely developed.
- 2 Sexual physiology and hygiene should be taught every boy when mental and sexual puberty make him capable of beneficially utilizing the knowledge.
- 3 The nature and scope of instruction on sexual subjects should be regulated according to each pupil's ability properly to appreciate the warnings inseparable therefrom.
- 4 The age at which a person may safely be instructed in sexual subjects is that age at which in each individual case, such instruction becomes necessary for the purposes of moral and physical prophylaxis.
- 5 The individuality of the parent, physician or teacher should be the guide to the choice of one or the other as the exponent of the facts.
- 6 Educational institutions may be utilized for instruction in sexual subjects, but such instruction must be given to small groups of pupils selected because of their mental parity as nearly as may be.
- 7 Text books on elementary hygiene should not contain chapters on sexual physiology. Those charged with imparting instruction on sexual subjects should be provided with separately printed chapters on the physiology and hygiene of these matters. These separately printed chapters could then be given with the greatest discretion to such pupils only whose mental development would preclude their misusing the information derived therefrom.

18. **Surgery of the Thyroid**—Ballin's experience is limited to 6 cases. He considers that 3 patients are cured, 2 very much improved, and one slightly improved. All these cases were very bad ones, with pulse over 140, severe nervous symptoms and intestinal disturbances. In each of these 6 cases he did a thyroidectomy, removing half or more of the diseased gland. He believes that this should be the operation of choice, if internal treatment fails.

Boston Medical and Surgical Journal

February 8

- 23 *The Problem of Psychiatry in the Functional Psychoses (Continued) E Cowles, Boston
 24 *Vaginapexy W P Graves, Boston
 25 Contractile Processes in the Lung as a Result of Phthisis with Reference Especially to Their Production of Permanent Dextrocardia. H B Dunham, Rutland, Mass

23—This article appeared elsewhere

24 Vaginapexy—This operation, which is used in cases of extreme vaginal relaxation, such as prolapse, incomplete and complete procidentia and advanced cystocele, is described by Graves (the operation was devised by W H Baker) as follows. The patient is placed in the Trendelenburg position and a small median abdominal incision is made. The intestines are packed away with gauze in order thoroughly to expose the posterior cul de sac. Beginning first on the right side, a point is selected a little posterior and external to the peritoneal reflexion of the posterior cul de sac from the wall of the uterus. This point is then seized with the bullet forceps, the forceps being carried deep enough in order actually to seize the wall of the vault of the vagina. In order to ascertain whether or not the wall of the vagina is included within the teeth of the bullet forceps it is a safe plan to have an assistant insert his finger in the vagina so that he can give information as to whether the vagina is really being drawn up by the traction of the bullet forceps. When it is found that the vagina is firmly grasped, a silk suture, preferably No 10 braided silk, is passed through the tissue to take the place of the bullet forceps. The suture is then passed up through the peritoneum, rectus muscle and fascia of the abdominal wall about one half to three quarters of an inch from the incision. It is then passed back again into the abdominal cavity and included with the other end of the suture in a pair of snaps. The same procedure is then carried out on the left side and the two sutures tied, drawing the vagina firmly up to the anterior abdominal wall and completely anteverting the uterus, the knots being thus left within the abdominal cavity. The abdominal incision is then closed with great care, in layers. In passing the suture through the floor of Douglas' pouch Graves has found it advantageous to employ the stitch devised by Max Broedel for the suspension of prolapsed kidneys, as it gives far greater tensile strength. It is necessary, however, to avoid carrying the suture through into the vaginal cavity.

Lancet-Clinic, Cincinnati, Ohio

February 10

- 26 Diagnosis of Some Painful Affections of the Feet. C R McClure Cincinnati
 27 A Few Ethical Thoughts G B Orr Cincinnati
 28 Contract Practice for Liability Insurance Companies R P Tate Cincinnati
 29 Experiences with the X Ray in the Treatment of Malignant Tumors A M Hayden Evansville, Ind.

Cleveland Medical Journal.

January

- 30 Paris Congress of Tuberculosis 1905 J H Lowman Cleveland
 31 *Two Unusual Complications of Labor T S Clark Cleveland

31 Unusual Complications of Labor—In the first patient mentioned by Clark, the lower portion of the vagina was entirely separated from the upper by a transverse membrane. The anterior attachment of the membrane was about one and a half inches and the posterior about two and a half inches from the vulva. Pressure against the membrane showed it to be firm, except at one point toward the left side, which yielded slightly. The color of the membrane was the same as that of the vaginal mucosa. Its thickness was about that of ordinary blotting paper. The second case was one of congenital displacement of the urinary bladder. The cavity of the pelvis was well filled with what appeared to be a cystic tumor attached to the left pelvic wall. The tumor disappeared on catheterizing. The catheter had to be passed upward, inward, to the left and then downward before the urine would escape.

Medicine, Detroit, Mich.

January

- 32 Hepatic Therapeutics H Richardson Baltimore
 33 *Economic Aspect of the Modern Treatment of Tuberculosis J W Pettit Ottawa Ill
 34 *Fractured Femur Treated by the Ambulatory Method R S Dubs Chicago
 35 Scopolamine and Morphine Anesthesia in Ophthalmic Surgery G F Suler Chicago

- 36 *Diagnosis of Neurasthenia F K Dercum Philadelphia
 37 *Early Arrest of Infection E Laplace, Philadelphia
 38 Study of Tropical Medicine Its Aim Its Method and Its Scope F C Wellman Benguela, E Africa
 39 Plan for the More Rational Use of Diphtheria Antitoxin B F Royer Philadelphia.
 40 Masturbation Among Women W L Howard Baltimore

33—See abstract in THE JOURNAL, Dec 16, 1905, page 1899

34 Fracture of Femur—Dubs reports a case of oblique fracture of the middle third of the femur in which there was a marked tendency to shortening. The ambulatory method of treatment was chosen. At the end of two weeks and five days the patient was allowed to get up and walk about with crutches, elastic traction being still applied. At the end of four weeks and five days traction was dispensed with. Five weeks and two days after the accident the patient was allowed to discard the crutches most of the time. Eight weeks after the accident the splint was removed altogether. Skiagrams taken one year after the date of the fracture show a perfect union and no deformity of bone.

36—See abstract in THE JOURNAL, Dec. 16, 1905, page 1901

37 Early Arrest in Infection.—Laplace states that the problem to be solved is the removal, so far as possible, of all the organisms which have entered the lymph vessels and are already beyond the reach of an antiseptic. Laplace accomplishes this by a squeezing or milking process of the wound. The parts around the wound are pressed on and a certain amount of serum exudes. This serum contains the staphylococcus and streptococcus, even after the wound has been squeezed four or five times, showing that the organisms invaded the lymphatics. When the hemorrhage stops, Laplace cauterizes the wound with pure carbolic acid. This causes a fresh hemorrhage. Further squeezing facilitates the flow of blood, and also increases the subsequent flow of serum or lymph. A dry dressing completes the treatment. If the case presents evidence of a marked and spreading infection, Laplace also scarifies the reddened area in addition to the procedures just mentioned. When the lymph channels are thoroughly emptied an ice cold antiseptic solution is applied to the parts for the purpose of giving direct entrance of the antiseptic into the affected lymph channels laid open by the scarification, in this way destroying the germs which may linger within the lymphatics. The solution used consists of one part of bichlorid of mercury to five parts of hydrochloric acid and 1,000 parts of water. Should pain result from this application the solution is made weaker. Internally, Laplace administers from 10 to 20 drops of tincture of chlorid of iron. He has followed this method of treatment in the case of minor wounds, such as infective cuts, scratches, excoriations, infected pimples, and erythema from starting erysipelas, for a number of years, and has always succeeded in checking the infection.

Wisconsin Medical Journal, Milwaukee

January

- 41 *Diagnostic Value of Cystoscopic Examinations W A Gordon, Jr Oshkosh, Wis
 42 *Pathology and Non Surgical Treatment of Injuries to the Stomach W Becker Milwaukee
 43 When and How to Begin Substitute Feeding L Boorse, Milwaukee
 44 *Case of Malformation of the Duodenum C J Habbegger Watertown, Wis.

41—See abstract in THE JOURNAL, July 1, 1905, page 67

42 Id.

44 Malformation of Duodenum.—The malformation reported by Habbegger occurred in a newborn infant that lived about five days. On the lesser curvature of the stomach there was a deep furrow which divided the organ into two parts, and which, if a little more marked, would have produced the anomaly known as the hour glass stomach. Just below the pylorus, which was normal, the stomach emptied into a cul de sac about the size of an orange which had no communication with the rest of the intestinal tract. This cul de sac was lined by a mucosa which differed from that of the stomach and corresponded with that of the duodenum. That part of the intestinal tract corresponding to the descending portion of the duodenum commenced in a narrow part as a continuation of the common duct. Clinically the condition present was identical with pyloric stenosis.

Therapeutic Gazette, Detroit, Mich

January 15

- 15 *Value of Ergot in Obstetrics—T. P. Davis, B. C. Hirst, J. C. Cameron and others
 16 Methods for Diagnosing Diseases of the Stomach—J. Saller, Philadelphia
 17 Hyperesthesia of the Gastric Mucous Membrane and Its Treatment—J. D. Steele, Philadelphia
 45 Surgical Aspects of Gastric Dyspepsia—J. B. Denver, Philadelphia
 19 Subcutaneous Injection of Paraffin for Nasal and Other Deformities and the Submucous Injection for Atrophic Rhinitis—A. B. Kirpatrick, Philadelphia

15 Value of Ergot in Obstetrics—Davis states that he is accustomed to use ergot in some form in the great majority of cases of labor. The only contraindication to its employment is excessive hemorrhage with a depleted condition of the vessels and a feeble heart. Strichnia is given with the ergot, because it rouses the ganglia of the uterus and stimulates the patient's nervous system. Davis never gives more than two drams of ergot by mouth at one time. He has never witnessed any untoward results from the use of ergot. Hirst uses ergot as a routine practice in all cases of labor as soon as the child is born. A very irritable stomach and persistent vomiting are contraindications to its use, but even in these cases, after the labor is over, Hirst has succeeded in having the ergot retained. If it has been necessary to anesthetize the patient he gives a deep hypodermic injection of ergot into the thigh as soon as the uterus is evacuated. In the case of twins, he has been in the habit of giving a dram of ergot by mouth after the birth of the first child if there is nothing about the condition of the second child to obstruct labor. Cameron uses ergot in all cases of labor unless specially contraindicated, after the uterus is emptied. He has never seen any untoward effects or accidents attributable to the use of ergot.

Ohio State Medical Journal, Columbus

January

- 50 Surgical Treatment of Gastric Ulcer—W. D. Haines, Cincinnati
 51 Catarrh of the Stomach—J. D. Dunham, Columbus
 52 Maximum Deformity of the Arm with Perfect Function—T. C. Lewis, Jr., Dayton
 53 Commercial Therapeutics—C. Luoy, Toledo
 54 Leucitis and I. A. Hamilton, Columbus
 55 Scopolamin-Morphin Ethyl Ether Anesthesia—R. A. Rice, Columbus
 56 Benefits of Medical Organization—W. B. Hedges, Delaware
 57 Typhoid Fever: Etiology and Pathologic Anatomy—H. Blank, Auburn, Orville
 58 Acute Suppurative Otitis Media as It Concerns the General Practitioner—D. S. Olmstead, Millersburg

53 Commercial Therapeutics—Luoy says that when physicians prescribe a preparation which is said to contain certain drugs, without knowing the exact amount of each constituent to the dose or their physiologic action, they are pursuing a course which disregards every teaching prescribed by a reputable medical school. They can not know whether new symptoms if they should arise, are due to the medicine or to the original condition of the patient. They are in absolute darkness so far as the interest of the patient is concerned. If dangerous symptoms follow such treatment they may be misled in their efforts to control them. The great mass of testimonials which laud many preparations so highly are born of ignorance and the evident desire of the author to see his name in print. Mushroom drug manufacturers, without a grain of medical knowledge, are springing up on every side with wonderful cures for diseases which heretofore have been hopeless cases. Luoy says that a most unfortunate feature of this situation is that some reputable medical journals are advertising this rot to the medical profession. If the profession did not support the manufacturers of this material the manufacturers would not continue in business. Luoy asserts that the tendency of the present, so far as medical therapeutics is concerned, is decidedly non-progressive. If physicians wish to remain true to the interests of their patients, to the profession and to themselves, they will refuse absolutely to prescribe any preparation which is not accompanied by a complete formula of its contents, as well as the amount of each constituent in a given quantity.

55 Scopolamin-Morphin Ethyl Ether Anesthesia—By carefully investigating the effects of scopolamin morphin ethyl ether anesthesia on 150 patients, before and after operation,

from the head nurse in charge, from the patients themselves, and by personal observation, Rice found it a very valuable addition to his method of anesthesia, which is as follows: About half an hour before the operation the patient is given 1/100 gr scopolamin and 1/6 gr morphin hypodermically. The general anesthesia is begun with bromid of ethyl, which he has used in from 2,000 to 3,000 cases. He always uses the drop method on the Esmarch mask until the air passages become accustomed to the slight irritation, then, when the patient has become unconscious, he pours on the mask about half a dram of the bromid of ethyl and at once covers the mask with gauze or a folded towel. The patient, after a deep inspiration or two, begins to relax, and after two or three more, Rice changes the mask for the ether cone, and in nearly every case, unless an unusually robust man, the patient passes from the ethyl anesthesia to that of the ether without a struggle. In 150 consecutive cases in which he used the scopolamin and morphin, fully 75 per cent of the patients were scarcely nauseated, about 20 per cent vomited a dram or two of mucus, and about 5 per cent vomited freely, this in many instances being doubtless due to an irritable condition of the stomach before the anesthesia.

Ophthalmic Record, Chicago

January

- 59 Two Splinters of Steel Removed from the Interior of an Eye with the Magnet—W. R. Murray, Minneapolis
 60 A Lachrymal Syringe—W. H. Wilder, Chicago
 61 Cataract Caused by a Discharge of Industrial Electricity—E. C. Fillett, Memphis, Tenn.
 62 *New Treatment for Trachoma—J. A. Pratt, Aurora, Ill.
 63 A New Trial Case—M. D. Stevenson, Akron, Ohio
 64 Complete Absorption of a Pannus Trachomatous Brought About by Typhoid Fever—F. C. Todd, Minneapolis

62 Treatment of Trachoma—The treatment employed by Pratt consists in thoroughly massaging the everted lids with boric acid powder. The massage pressure is made by a cotton wound probe. The partially dissolved powder is allowed to remain under the lids. The eye is bandaged and cold applications are applied. This treatment is repeated after three days and is continued until there is no further evidence of the disease. No scars result and the treatment has been entirely satisfactory to Pratt in about twenty cases in which it was employed.

Archives of Pediatrics, New York

January

- 65 *Unusual Case of Tuberculosis in an Infant—C. W. Townsend, Boston
 66 Plea for a More Prominent Position of Glandular Fever Among Infectious Diseases—A. E. Vipond, Montreal
 67 Typhoid Fever in Children—L. C. Ager, New York
 68 Case of Tumor of Cerebellum with Necropsy—C. F. Judson, and C. D. Camp, Philadelphia

65 Unusual Case of Tuberculosis—The patient, whose case is reported by Townsend, was the second child of exceptionally healthy parents. The family history was good. The only cases of consumption in the family were remote and occurred in collaterals. The food of the child was breast milk for the first seven months, at the end of which cow's milk, modified with cereal water, was given. This milk was of the best, coming from cows that were frequently tested for tuberculosis and whose milk was used especially for infants. The infant received no other food. At the age of nine months the child was suddenly taken sick with fever and vomiting. The fever continued for over two months and ended in death. During all this time nothing was found on physical examination, except a slight otitis media of one ear. The drum was punctured and a thin serous fluid escaped. Several times in the course of the disease the ears were examined, but nothing abnormal was found, so that otitis as a cause of the fever was ruled out. In this way several other causes of fever were eliminated. The fever varied irregularly from 100 to 104 F and was often higher in the morning than at night. On several occasions it became normal and once or twice it was subnormal. The general course of the fever was lower during the last two weeks of the disease. At the end, however, it mounted rapidly above 106 F. The infant's digestion was good during nearly the whole course of the disease. During the last month, however, vomiting and disinclination to take food became prominent features. Bile was often vomited. There appeared to be no

evidence of intestinal or of gastric indigestion, or of accumulation from pyloric stricture, and it was believed that the vomiting was reflex from the fever. Thorough evacuations with calomel had no effect on the fever. The autopsy showed extensive tuberculosis throughout the peritoneal cavity.

Indiana Medical Journal, Indianapolis
January

- 69 *Observations of Tuberculosis Sanatoria in the West. T Potter Indianapolis
70 *The Cigarette Its Relation to Mental and Nervous Diseases W B Fletcher Indianapolis

69 *The Tuberculosis Sanatorium.*—Potter, secretary of the Indiana state tuberculosis commission, presents the following conclusions arrived at by the committee as to the institutional treatment of tuberculosis. First, the sanatorium plan has decided advantages over any other for most cases. Second, this plan of treatment does not require very expensive buildings nor an elaborate plant, provided the chief purposes of the plan are kept in view. Third, the method and skill of the management are of more importance than the material equipment. It is the men behind the guns who contribute most to success. Fourth, the great majority of the patients easily, cheerfully and quickly fall into line with the regulations and life of a well managed sanatorium, just as do the great majority of students in an educational institution. Fifth, a notable spirit of cheerfulness and hopefulness prevails in a well managed sanatorium. Sixth, in a large proportion, about 70 per cent, of cases of early pulmonary tuberculosis, the disease may be arrested and the patients returned to useful activity by this plan of treatment, intelligently and faithfully carried out. Seventh, it was the universally expressed belief by the medical officers of western sanatoriums visited by the commission that, at least approximately, good results could be obtained by a similar plan of treatment in any climate. Eighth, the committee was everywhere impressed by the emphasis put on the educational value of these sanatoriums in the crusade against tuberculosis. Ninth, everywhere and always in these institutions tuberculosis is emphasized as being an infectious disease. The most stringent precautions, therefore, are taken against the spread of this infection. These measures, very simple and easily practicable when understood, practically insure against danger. It has come about, therefore, that one of the places of greatest safety against tuberculous infection, among the habitations of men, is the sanatorium for the treatment of this dread disease. All the inmates evidently feel so, because they make it so.

70—See abstract in *THE JOURNAL*, Nov 4, 1905, page 1436

Columbus Medical Journal
January

- 71 County Society J C Larkin, Hillsboro Ohio
Journal of Nervous and Mental Disease, New York
January
72 *Two Unusual Tumors of Brain H C Gordinier and H W Carey Troy N Y
73 *The Association of Epilepsy with Muscular Conditions Fitting Best into the Cadre of the Myopathies. A. Onuf, Sonyea
74 Multiform Tic Including Automatic Speech and Purposive Movements M Prince, Boston

72 *Two Unusual Brain Tumors.*—The first case reported by Gordinier and Carey was a multiple cylindroma of the base of the brain, involving the second, third, fourth and eighth cranial nerves and producing symptoms closely simulating a tumor of the quadrigeminal bodies. Death resulted from exhaustion. The second case was a neuroepithelioma of the choroid plexus of the fourth ventricle, growing dorsally and producing symptoms characteristic of a tumor of the medium lobe of the cerebellum. There was no history of having received an injury to the head.

73 *Epilepsy and Myopathies.*—Onuf reports 6 cases of epilepsy in which the patients presented partly muscular atrophies partly defective muscular action without clearly demonstrable atrophy but with definite distribution of these disturbances manifested on the whole as follows. Wing like standing off of the scapulae, due, apparently, chiefly to weakness of the trapezius possibly also of the serratus magnus, rhomboids and levator anguli scapulae muscles, atrophies of

the scapular muscles in a strict sense, namely, the infraspinatus and the supraspinatus, also occasionally of the deltoids and other muscles of the shoulder joints, lordosis of lumbar spine in erect position, disappearing in sitting position, a phenomenon clearly explained by Gowers in "pseudo muscular hypertrophy" as due to weakness of the extensors of the hip, causing an inclination of the pelvis forward and compensatory bending backward to the body, pes valgus, involvement of the facial muscles (2 cases only), electrical changes manifested most frequently by a reversal of the galvanic formula, particularly in the deltoid muscles, fibrillary twitchings (2 cases). This muscular symptom complex was not present in all cases alike nor in the same degree. In some cases the lordosis was chiefly developed, in others the wing scapulae, and the flatfoot was present in all cases but one, the facial involvement was found in only 2. Qualitative galvanic changes were found in at least 4 cases, fibrillary twitchings in 2. Onuf states that the distribution of the muscular disturbances conforms best with that of the myopathies, but the presence of qualitative electrical changes (reversal of the galvanic formula) found in at least 4 cases, and the presence in 2 cases of fibrillary twitchings, speak rather against it. Of interest is the association of the malady with epilepsy—an association which Onuf has not found mentioned in any of the familiar text-books on nervous diseases. The interesting question arises whether or not a case of epilepsy thus complicated can be called idiopathic.

Northwest Medicine, Seattle, Wash
January

- 75 Early Diagnosis of Tuberculous Disease of Tonsils Pharynx and Larynx J A M Hemmeon Seattle, Washington
76 Early Diagnosis of Tuberculosis of Bones and Joints P W Willis, Seattle, Wash.
77 Early Diagnosis of Tuberculosis of the Peritoneum and Female Genitalia W M Karshner Puyallup, Wash
78 *Early Diagnosis of Tuberculosis of the Urinary Tract and Male Genital Organs. G W Hawley Seattle Wash
79 *Acute Atypical Pulmonary Tuberculosis S H Johnson Bellingham Wash.
80 Tuberculin as a Diagnostic Agent. W R M Kellogg Seattle Wash

78 *Tuberculosis of Urinary Tract and Male Genital Organs.*—Hawley suggests the following rules. 1 In all cases of hematuria (especially transient hematurias of doubtful cause), always bear in mind the possibility of tuberculosis. 2 Every cystitis, not due to the gonococcus or infection from without, should be considered suspicious of tuberculosis and be subject to careful observation. 3 In all suspected cases the patients should be subjected to thorough and repeated examinations. 4 Until a positive, simple method is at hand for identifying the tubercle bacilli in the urine we are not warranted in claiming their presence, except when found in large numbers, unless we have taken steps to procure a urine free from smegma bacilli. 5 In all suspicious cases evidence of tuberculous lesions in other parts of the body should be sought. 6 When the slightest doubt remains concerning any case the tuberculin test should be used. 7 A diagnosis is never complete until the source of infection has been traced.

79 *Acute Typical Pulmonary Tuberculosis.*—The previous history of Johnson's patient shows that she had suffered from the ordinary diseases incident to childhood. While returning home from a party she became wet and contracted what she thought was a severe cold. For two weeks following she suffered from shortness of breath on much exertion, loss of appetite, general depression, and pain over her left side, not localized. Her temperature was 98 F, pulse 110 and feeble, respiration was rather hurried, there was no cough and no expectoration, moderate dyspnea, slight cyanosis. On auscultation no rales were detected, and percussion revealed no areas of dullness. The tongue was slightly coated, bowels regular, urine normal. The pain complained of over the left side of the chest, and which at times extended down the anterior part of the left thigh, was diagnosed as neuralgia of the intercostal and anterior crural nerves. The patient was put on a tonic treatment and advised to take a vacation of a month, which she did. During this time her physical condition was carefully studied, inasmuch as no positive diagnosis had yet been made. At the end of a month she was sent to the hospital.

By this time the symptoms were nearly all aggravated. A thorough physical examination revealed nothing more abnormal and the case remained undiagnosed. After diligent search for the tubercle bacilli the results were negative. Seven weeks after her admission to the hospital a third microscopic examination of the sputum revealed an enormous number of tubercle bacilli and a diagnosis was made of acute pulmonary tuberculosis.

Western Medical Review, Lincoln, Neb
January

- 51 *Trypanosomes and Disease H B Ward Lincoln
52 *Variations from Routine Necessary in Some Operations for Inguinal Hernia J P Lord Omaha
53 Acute Endocarditis Its Etiology and Symptomatology C W M Pointer Lincoln
54 *Four Years of Experience with Scopolamin Morphine as a General Anesthetic B I I Gettiff Sutton

51 Trypanosomes and Disease—Ward reviews what is known as trypanosomes, and points out their relationship to disease in the human species. Speaking of the *Spirochæta pallida* he says that it would be natural to expect that this group of flagellates which contains so many disease producing organisms that attack lower animals, should yet furnish the explanation of the etiology of human diseases hitherto unexplained. In maladies which are evidently of germ production, it is more likely that the cause is to be found among the untamed protozoa rather than that the refined technique of the modern bacteriologist has been unsuccessful in detecting the plant germ which produces it.

52 Variations in Hernia Operations—Lord considers that the Bassini operation for inguinal hernia occupies first place, because it has stood the test of time. In exceptional cases, however, he thinks that the newer methods are to be preferred because departure from routine methods is necessary in some cases of inguinal hernia.

54 Scopolamin-Morphine Anesthesia—For four years Gettiff has employed this method of producing anesthesia, following the suggestions of Korff. He says he has yet to see the first case of headache, vomiting, disturbed digestion, retention of urine, and especially intestinal paresis, after abdominal operations, although occasionally, in very choleric patients and after insufficient preoperative preparations, a peculiar muddy discoloration of the skin and a not very agreeable so called bilious smell emanating from the patient but soon passing off, has been observed by him. The ages of his patients ranged from 10 to 80 years, and the number operated on is over 60, with only one death, which occurred twelve weeks after the operation from other causes. His series includes about 40 abdominal sections.

Physician and Surgeon, Detroit and Ann Arbor, Mich
November

- 55 Review of the Life of Ludwig W P Lombard, Ann Arbor
56 Cases of Heart Disease G H Cattermole, Boulder, Colo
57 Renal Calculus C G Darling, Ann Arbor

Ophthalmology, Milwaukee, Wis
October, 1904

- 58 Consequence of Ophthalmic Error W Schoen, Leipzig, Germany
59 Pathologic Results of Dextrocularity and Sinistrocularity G M Gould Philadelphia
60 Hysterical Asthenopia H M Fish, New Orleans
61 Saccharine Saline Injections in Ophthalmic Practice L W Fox Philadelphia
62 Blepharorrhaphy (Tarsorrhaphy) A B Hale, Chicago
63 Acute Dacryocystitis A C Snell, Rochester, N Y
64 Relation of Diseases of the Eye to Those of the Teeth W Rebar, Philadelphia

January, 1905

- 95 Congenital Word Blindness W D Bruner, Cleveland
96 Binocular Fixation and the Hypothesis of the Dominant Eye P H Iridenberg New York
97 Cases of Retinal Separation A Greenwood, Boston
98 Comparative Tests of Colored Glass Used in Railway Signal Lamps N M Black, Milwaukee
99 Improved Series of Wools for the Detection of Subnormal Color Perception, Color Blindness C A Oliver
100 Medical Relations of Ocular Injuries, Pensions and Insurance Rates and a Reference to a Scientific Plan for Estimation of the Loss of Earning Ability H V Würdemann, Milwaukee

April, 1905

- 101 Epithelioma of the Lid Removal by Dissection and X Ray Treatment W H Snyder Toledo
102 Periloma for Diffuse Cornitis and Other Affections of the Cornea S Snell Sheffield
103 Sarcoma of the Orbit F O Belt Washington
104 Blepharitis of the Upper Lid H Harlan and R H Johnston, Baltimore

- 105 The Question of Iridectomy in Glaucoma Simplex. F E Cheney, Boston
106 Intraocular Tuberculosis W C Posey, Philadelphia
107 Remarks on Molluscum Contagiosum B H Oppenheimer, Berlin
108 Treatment of Pyogenic Infection of the Eyeball A M Ramsay, Glasgow
July, 1905
109 Astigmatism After Cataract Extraction as Modified by the Conjunctival Flap C F Clark, Columbus
110 Ophthalmometry B L Gibbons, Baltimore
111 Dionin (ethyl morphine hydrochlorate) in Ocular Therapeutics L Connor, Detroit
112 Local Anesthetics and Analgesics in Ophthalmic Practice. B F Church, Los Angeles, Cal
113 Lesions of High Myopia Clinically Considered H F Hansell, Philadelphia
114 Microphthalmos, Persistent Pupillary Membrane, Anterior Synechia and Central Congenital Opacity of the Cornea J W Stirling, Montreal
115 Kuhnt's Conjunctival Flap G F Suker, Chicago
116 Nitric Acid Burn Involving the whole External Portion of the Eyeball, Much of the Conjunctiva Replaced by Epithelial Mucous Grafts Taken from the Lower Lip, Recovery with Useful Vision C A Veasey, Philadelphia
October, 1905
117 Paralysis of Divergence. A Duane, New York
118 Paralysis of the Upward Movements of Both Eyes W Zentmayer, Philadelphia
119 Tumors of the Conjunctiva and Cornea J M Ray, Louisville, and F H Verhoeff, Boston
120 Primary Melanotic Sarcoma of Eyelids R H Johnston, Baltimore
121 Id H V Würdemann, Milwaukee
122 Ophthalmology in Japan M Inoue, Tokio, Japan
123 Anatomy of the Eye According to the Ancients E E Blaauw, Buffalo
January, 1906
124 History of the Ocular Treatment of Migraine and Headaches O Wilkinson, Washington
125 What Are the So Called Reflexes Which Can Properly Be Referred to Eystein? L Howe, Buffalo
126 Symptoms of Ametropia H F Hansell, Philadelphia
127 Retinal Hemorrhages in Apparently Healthy Eyes E W Stevens, Denver
128 Description of a Single Stitch Operation for Advancement of the Exterior Ocular Muscles C A Oliver, Philadelphia
129 New Punch for Removing Membranes from the Postpupillary Space in Traumatic or Secondary Cataract and for Making an Artificial Pupil M D Stevenson, Akron
130 Intraocular Irrigation J A Lippincott, Pittsburg, Pa
131 Euphthalmia Conjunctivitis C J Klipp, Newark

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

January 27

- 1 *Carcinoma of the Breast and Its Spread into the Lymphatics C B Lockwood
2 *Swellings of the Breast, their Diagnosis and Treatment. A. Clark
3 *Enucleation of the Prostate for Hemorrhage W Thomson
4 *Ventriculation W J Sinclair
5 *Immediate and Remote Results of the High Operation for Varicocele E M Corner and C A R Nitch
6 Secondary Carcinomatous Growths Simulating Tuberculous Hip-Joint Disease and Military Tuberculosis R D Lord and C W Buckley
7 *Simultaneous Excision of Two thirds of the Stomach the Anterior Face of the Pancreas and the Transverse Colon for Carcinoma C P Child
8 Accurate Delineation of Tuberculous Foci in Early Disease of the Kidney in Women Before Operation is Undertaken H Fenwick

1 Spread of Carcinoma—Lockwood claims that the rapidity with which cancer spreads into the lymphatics depends to a large extent on the position of the primary growth. When that is situated within a hollow muscular organ, such as the urinary bladder or gall bladder, the pause may be a long one, but when the growth is in the mammary gland, in the tongue, or in the pharynx, he believes that there is hardly any interval between the onset of the growth and its spread into the neighboring lymphatics. In cancer of the breast he has found that the tumors in the lymph glands soon grow larger than the tumor from which they sprung, even though the presence of the growths in the lymph vessels can not be seen during the operation, except, occasionally, in very advanced cases. Lockwood advises the use of the microscope in all cases. He considers the duct carcinoma to be as malignant as any other variety. He also thinks it probable that cancer may cross in the lymph channels from one breast to the other, and cites one instance of carcinoma spreading against the lymph stream.

2 Swellings of the Breast—Clark discusses the differential diagnosis of neuralgia of the breast, mastitis, abscess, cysts,

and benign and malignant tumors. He considers the following the ideal way of examining a breast that is the seat of a swelling.

The patient should preferably be seated in an ordinary chair, with her arms hanging down and the doctor seated opposite. If for any reason she has to be in bed, she should be placed flat on her back with her head and shoulders slightly raised and her arms lying beside her, the doctor standing at the left side of the bed. A shawl may be thrown loosely over the shoulders otherwise the upper part of the body should be completely uncovered. Inspection is the first thing. The surgeon looks at the two breasts, noticing particularly any enlargement of either, or any puckering of the skin also any alteration in the normal appearance of the nipple, and whether the two nipples are exactly opposite one another. He then places his hand flat on the affected breast and carefully feels it all over. If he detects no tumor by manipulating in this way, he may be satisfied that there is not one. Should he feel a tumor he will first notice whether it is tender or not, then satisfy himself whether it is circumscribed or diffuse, then by lightly moving his hand laterally to and fro whether the skin is adherent to it, then whether it is adherent to the pectoral muscle, and to ascertain this it is well for an assistant to support the arm and alternately to relax and to tighten the pectoral. The next thing is to examine the tumor with the two forefingers ascertain its relative hardness and to decide whether there is fluctuation or not, and, lastly, the axilla and supraclavicular region should be examined for enlarged glands. In doing this the arm should be supported and the muscles forming the axilla relaxed and two fingers of the right hand employed. The whole axilla should be felt, more particularly the outer part, as there are usually glands found enlarged along the line of the axillary vein. If there are any. The forefinger should carefully feel the hollow above the clavicle and the back edge of the sternomastoid muscle. It is desirable also to examine the axilla of the unaffected side, as some people have enlarged glands from another cause and the enlargement on the affected side may not be due to the condition of the breast.

3 Enucleation of Prostate for Hemorrhage.—Thomson advocates the removal of the prostate for hemorrhage that can not be controlled otherwise. He cites one case in support of his contention.

4 Ventral Fixation.—Sinclair states that the operation of ventral fixation of the uterus, when properly carried out, is a most valuable one in the treatment of displacements of the uterus.

5 High Operation for Varicocele.—Corner and Nitch detail the results in 100 cases in which the high operation for varicocele was performed. After exposing the cord by a short incision, the pampiniform plexus was isolated, ligated in two places, about two inches apart, and the intervening portion excised. In some cases the two ends were approximated by a suture which transfixed the stumps. In 2 per cent of the cases some recurrence of the varicocele was noted, but in neither instance was there any pain or discomfort. An inguinal hernia was present in 2 per cent. Two patients had a spermatocele. In 8 per cent there was a tense hydrocele, and in 15 per cent there was present a flaccid hydrocele which did not cause any symptoms. In 84 per cent the sensibility of the testes was unaltered, it was increased in 9 per cent, decreased in 5 per cent, and lost in 2 per cent. Four patients stated that they were worse after the operation. Twenty six reported themselves as being neither better nor worse, 70 patients were definitely improved and well satisfied.

7 Extensive Operation for Carcinoma.—In the case reported by Childe the greater portion of the transverse colon was excised, not because it was involved in the disease, but on account of the necessity of sacrificing its blood supply in order to get wide of the growth. About one third of the stomach, at the cardiac end, was not removed so as to permit of a gastrojejunostomy. The growth infiltrated the anterior and posterior walls of the stomach for about half their extent. The pancreas was firmly attached to the stomach. The four openings made in the gastrointestinal tract were all closed with a double row of continuous silk suture. No button or bobbin of any kind was used. Five weeks after the operation the patient was up and about, taking ordinary solid food of digestible quality, and not in too large quantity, and was rapidly gaining in weight and strength.

The Lancet, London.
January 5

- 9 'Acute Abdomen' W. H. Battle
- 10 Institution and Sanatorium Treatment of Pulmonary Tuberculosis in Relation to Large Centers of Population F. F. Trevelyan
- 11 Evolution of Operative Gynecology D. L. Roberts
- 12 'An Experimental Investigation of the Budde Process for the Preservation of Milk' R. T. Hewlett
- 13 Two Cases of Leukemia Treated by the Roentgen Rays W. I. Bruce
- 14 'Interrupted Circulation as a Therapeutic Agent' W. Ewart
- 15 Experiments in Hypnosis E. Ash.

- 16 Acid Extract of the Duodenal Mucous Membrane as a Remedy in Diabetes Mellitus J. H. Abram
- 17 'New and Easy Process of Triple Staining for Cytological and Histological Purposes' V. Bonney
- 18 Importance of a Strictly Limited Lactation A. D. Fordyce

12 Budde Process for Preserving Milk.—With a view to testing the efficiency of the Budde process for the preservation of milk, Hewlett conducted a series of experiments, from the results of which he draws the following conclusions:

1 All the non-sporing organisms, pathogenic and non pathogenic, dealt with—viz, the *Bacillus tuberculosis*, the *Bacillus diphtheriae*, the *Bacillus agidi lactici*, the *Bacillus typhosus*, the *Bacillus coli communis*, the *Bacillus dysenteriae*, a paratyphoid bacillus, the *Micrococcus pyogenes aureus* and the *cholera spirillum*—are destroyed by the process.

2 Sporing forms—viz the *Bacillus anthracis*, the *Pentacillium glaucum*, the *Bacillus subtilis*, and the *Bacillus mycoides*—are not destroyed by the process although reduced in numbers, the inference being that the vegetative forms are destroyed but the spores are not destroyed.

3 Although the heating *per se* may be efficient in destroying certain non-sporing organisms—e. g., the *Bacillus diphtheriae*, the *Bacillus typhosus*, and the *cholera spirillum*—it is not so in all cases. Thus in one experiment the *Bacillus typhosus* and the *Micrococcus pyogenes aureus* survived the heating when no peroxid was added, and under similar conditions the *Bacillus agidi lactici* survived in the two experiments in which this was tested.

4 The same fact is strikingly shown by the effect of "Buddelsing" on the natural milk—i. e., the milk without added micro-organisms. The reduction in numbers effected by heating alone is far less than with "Buddelsing."

5 "Buddelsed" milk is practically indistinguishable from untreated milk in taste, odor, appearance, and in the rising of the cream. No increase in acidity is caused by the treatment.

6 "Buddelsed" milk will keep perfectly sweet and apparently unaltered in odor, taste and appearance for at least from eight to ten days in hot weather and for a still longer period in cold weather.

7 In milk obtained in the ordinary way without special precautions the micro-organisms are reduced by the Budde process over 99.9 per cent. In the milk kept at room temperature the small residuum of living micro-organisms multiplies daily and ultimately (after from 12 to 14 days) may cause the milk to go bad.

8 The distribution of the "Buddelsed" milk in closed bottles is in itself a great improvement on the routine system of distribution in open vessels.

9 The method excludes all possibility of adulteration of the milk by the vendor before it reaches the consumer.

10 Properly carried out, the whole of the added hydrogen peroxid is decomposed at the end of the process and no trace of it can be detected in the treated milk.

The principle of the Budde process is as follows. The milk is obtained in as clean a condition as possible, and if it has to be kept for any time before treatment it is efficiently chilled, but usually it is treated soon after milking. A proper proportion of peroxid of hydrogen is added to the milk and the mixture is heated to from 51 to 52 C for at least three hours. A temperature below 48 C is not efficient and one above 55 C should be avoided as this tends to induce changes in the milk. With the aid of the heating the hydrogen peroxid is completely decomposed into water and oxygen by an enzyme (catalase) present in the milk, and the oxygen at the moment of liberation being in a nascent condition acts as an efficient germicide. At the end of the process the whole of the hydrogen peroxid should have been decomposed, provided the right proportion has been added, so that no antiseptic remains, a small but inappreciable addition of water has been made to the milk, and the majority of the micro organisms have been destroyed. The amount of hydrogen peroxid required to obtain this result is about 15 cc of a 3 per cent solution per liter of milk, so that the quantity of water added to the milk amounts to about 15 per cent, which, on a basis of 3 per cent of fat, would reduce the percentage of fat to 2.95 in the treated milk, a reduction in the percentage of fat of about 0.05, an amount which may be regarded as negligible. The milk is treated in bulk and immediately bottled with suitable precautions and supplied to the public in the bottles, a fact which alone should commend it. The milk so treated is practically unaltered in appearance and flavor, the cream rises as usual, all ordinary non-sporing pathogenic germs are destroyed, and the milk will keep sweet for at least eight or ten days in hot weather.

14 Interrupted Circulation in Rheumatoid Arthritis.—Ewart emphasizes the efficacy of this method in reducing the swelling and the pain associated with the intra articular effusion of synovial fluid, or the para articular effusion of lymph. He says that the immediate relief afforded in cases of acute arthritis, whether rheumatic or gonorrheal, and in cases of sprain, is equally striking. In joints chronically thickened or fixed the improvement reported has not resulted in a complete cure.

five minutes imbedding, cutting into sections, mounting and drying staining for one half to four minutes with Mann's solution (35 cc of 1 per cent aqueous solution of methylene blue and 95 cc of 1 per cent solution of eosin, plus 100 cc of distilled water) brief rinsing in water, brief rinsing in absolute alcohol absolute alcohol, plus solution of soda, for fifteen to twenty seconds rinsing in absolute alcohol, water for one minute, water plus acetic acid for two minutes, rapid drying and imbedding. The Negri bodies were described in these columns on page 1490 of volume xlv—1 p.]

68 Extirpation of Semilunar Ganglion—Pieri was unable to detect anything abnormal in 8 rabbits after removal of part of the celiac plexus. As soon as the wound had healed the animals were apparently in normal health for months afterward. The loss of the semilunar ganglion did not seem to have any influence on the weight of the animals. Methylene blue taken into the stomach passed into the urine just as promptly as in the sound animals.

69 Nitrate of Silver in Pneumonia—Belfadel relates the histories of 24 patients with pneumonia treated with 15 cc of silver nitrate daily. He remarks that the results were not such as to encourage its further use.

70 Attitude in Asthma—In differentiating the various forms of asthma, Minervini lays great stress on the attitude during the attack. In bronchial asthma the patient gets up and goes toward a door or window seeking for air, supporting himself by a chair or window frame, retaining his sense of direction and coordination. If he can seize the back of a chair with both hands he clings to it, his shoulders raised and his body stooping forward. In cardiac asthma the patient is much weaker during an attack. He sinks into a chair or sits at the side of his bed, immovable, dumb, anxious, supporting himself with his hands on the seat of the chair or bed beside him. In uremic asthma the patient also assumes this position from lack of energy to rise, but he is much agitated and tosses his arms and legs about, the convulsive agitation sometimes passing into a rapidly fatal depression. He gives illustrations of the various types.

71 Typhoid Gangrene—The robust young man whose case is described succumbed to the effects of gangrene of the leg, a complication of typhoid fever. He had injured his leg in a bicycle accident a week before the onset of the typhoid. It is possible that the trauma may have caused a place of lesser resistance in the artery where the typhoid bacillus set up the arteritis responsible for the fatal gangrene.

72 Recent Progress in Therapeutics—Baccarani refers exclusively to Italy in his remarks. He congratulates his Italian confrères on the marked caution they have displayed in accepting and using the new drugs with which the markets are being constantly flooded. The tendency is constantly more apparent, he says, to return to the old, tried remedies of the pharmacopœia. "Why," he exclaims, "should we abandon the wealth of material which the long and continued experience of men, past-masters in the art of observing, has established as effectual? All we have to do is to go over the indications for their use with the aid of the lights of modern medical knowledge." In regard to organ therapy he thinks that results have not justified the high anticipations at first and that the subject requires much more study before it is definitely accepted that the extracts of certain organs are able to supplement the lacking, the exaggerated or the perverted internal secretions of certain organs. Vastly more encouraging is the outlook in what he calls "the new branch of the medical sciences, medical surgery." By this he means the close co-operation of the physician and surgeon in affections such as cirrhosis of the liver, nephritis, appendicitis, etc., and the therapeutic use of lumbar puncture. He says that serum treatment in the hands of the Italians has continued to give fine and durable results, as also the milk of immunized cows. Lucatello treats anemia with serum from animals previously treated with blood from anemics. Baccarani refers also to Bozzolo's successful treatment of leukemia with the α rays, Tizzoni's encouraging experiences with radium in rabies and the continued success of Baccelli's intravenous injections of drugs in threatening conditions. The Italians have also confirmed the importance of salt in dropsical affec-

tions, restriction of salt tending invariably to reduce the effusions.

77 Action of Formiates on the Circulation.—Lavierato was unable to discover any appreciable action on the heart or vessels from administration of formic acid or the formiates.

78 Percussion of the Sternum—Landolfi has noticed increased resonance over the sternum when there is a cavity in the lung. When the resonance over the sternum persists as the patient reclines, but vanishes when he lies on one side, this can be accepted as a sign of hydrothorax or pyopneumothorax. Banti was the first to call attention to the retrosternal dullness observed in case of pleurisy with effusion, which aids in differentiating it from pneumonic lesions. Lavierato affirms that the normal aorta does not alter the plessimetric findings over the sternum, but when the artery is dilated or altered by age there is dullness. The dullness becomes more pronounced as the trunk is bent forward. Enlargement of the right auricle is also liable to induce dullness.

80 Tetanus and Subcutaneous Injections of Quinin—Grixoni reviews the various cases on record in which tetanus followed subcutaneous injection of gelatin, vaccine or quinin. He also relates experiences carried on at the Scuola d'Applicazione di Sanità Militare to determine whether tetanus germs can survive an ordinary solution of quinin. Tetanus spores are able to live in solutions of quinin, such as are currently used for subcutaneous injection, maintaining their vitality and virulence for a long time. Heating the solution to 105 C for ten minutes or to 100 C for twenty minutes always killed the spores in his tests. His further experiences disproved the assumption that injections of quinin have any influence on tetanigenous germs which may be present in the organism in the latent state. Fifteen years ago injections of quinin were comparatively rare, yet 615 deaths from tetanus occurred throughout Italy. The number has constantly declined, until last year there were only 250, and 162 of these patients were farm hands or stablemen. The military statistics have ceased to list tetanus, showing that there has been no mortality from this cause during the last few years, although the number of injections of quinin is now very large. The cases of tetanus observed after subcutaneous injection of quinin must have been due to contamination of the solution used, the germs finding a favorable soil for developing in the conditions produced by the injection of the quinin in a hypertonic solution. The reason that such accidents are not observed after injection of morphin, caffeine, strychnin, etc., is because these drugs do not cause anatomic changes at the point of the injection. When the quinin was dissolved in a physiologic saline solution no trouble of the kind has ever been observed. This assumption that the tetanus was the result of the development of the germs in the histological lesions produced at the point of the injection is sustained by the fact that quinin by the mouth has never displayed any general or local action in respect to tetanus. Grixoni refers frequently to Vincent's article, summarized in these columns on page 1646 of vol xlv, 1905. He thinks that the results in Vincent's cases were due to the destructive changes induced by the concentrated solution which he used. The osmotic tension of the blood must have been violently disturbed.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits or in the interests of our readers.

MY SYSTEM, Fifteen Minutes Work a Day for Health's Sake. By J. P. MÜLLER. With 44 Illustrations (from Photographs) and a Time Table. Authorized Translation by G. M. Fox Davies, from the Fifth Edition (30th Thousand) of the Danish Original. First Edition. Published by Tilling's Boghandel, Copenhagen, 1905. Paper. Pp. 90. Price, 75 cents. Agents for America, New York: G. B. Stechert & Co.

BIENNIAL REPORT OF THE BOARD OF TRUSTEES OF MILWAUKEE HOSPITAL FOR INSANE, for the Two Years Ending Sept. 30, 1904. Paper. Pp. 55. Madison: Democrat Printing Co., 1905.

INDIGESTION, an Elementary Study of Its Causes and Treatment. By F. Clarke. Cloth. Pp. 85. New York: William Wood & Co.

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Original Articles

A NEW TECHNIC FOR BREAST AMPUTATION

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I wish briefly to present the description of a new technic for use in radical operations for carcinoma of the breast. I devised this method of operation about eight months ago, and since then I have used it exclusively in all cases of this character with which I have had to deal. From this experience, though limited to eight cases, I believe that the method has certain elements of advantage, as well as originality, that justify me in presenting it to the medical profession.

The skin incision in this operation is begun at a point about one and one-half inches below the middle of the clavicle, in the sulcus, marking the interval between the deltoid and the pectoralis major muscles. From this point the incision is carried in a straight line along the sulcus, parallel to the inner border of the deltoid muscle, until it reaches the lower border of the pectoral fold as it terminates in the arm. This straight incision is all that is made in this early step of the operation, but for the sake of clearness the complete incision is outlined here, that the general picture thus may be better obtained.

From the lower border of the first incision the knife is now carried along the under margin of the pectoral fold to the chest, at a point which corresponds, as a rule, with the lower border of the mamma itself. The remaining portion of the incision is made in the form of an ellipse about the nipple, with its long axis nearly vertical, or, rather, obliquely, from above downward and outward to the outer quadrant of the breast. This ellipse is so planned as practically to make its outer curve parallel with the line of the first incision made, and thus to present, when completed, a quadrilateral flap with its base upward and entirely free below. This incision, of course, is carried through the skin and fascia down to the underlying muscular structures (Fig 1).

In the actual procedure, as before said, only the first incision is used in the early stages of the operation, but, if necessary to give greater space, a portion of the incision splitting the pectoral fold may likewise be made. As this incision is carried down through the skin and superficial fascia it exposes the fibers of the pectoralis major muscle converging well to its tendinous insertion in the humerus. At the lower point of this incision, where it curves along the under border of the pectoralis major the index finger of one hand is now shoved up underneath the pectoralis major muscle and brought out again at its upper border so that the entire pectoralis muscle is thus hooked up on the index finger, and by blunt dissection separated out to its tendinous insertion. If however one wishes to follow the suggestion of Dr C H Mayo and leave the clavicular portion of the pecto-

ralis muscle, this can easily be accomplished by bringing the finger up through the interval, usually well marked, between the clavicular and sternal portions of the muscle, and thus the clavicular portion can be separated and left in place. With the tendon of the pectoralis muscle thus lifted up, as shown in Figure 2, it is now divided by the scalpel very close to its insertion into the humerus. The muscle immediately retracts toward the chest and exposes, underneath, the pectoralis minor muscle invested

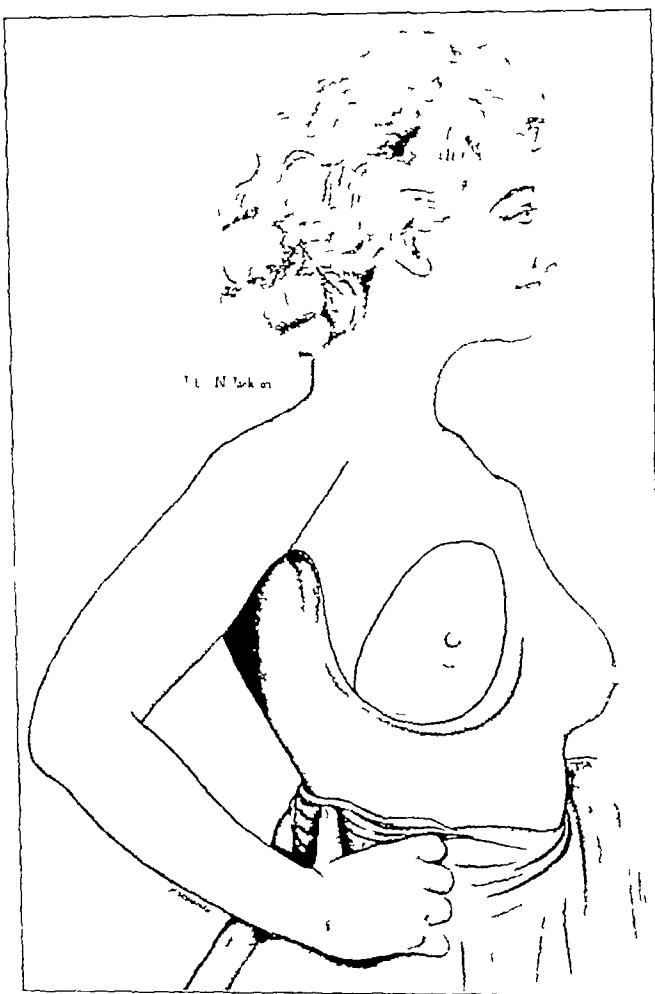


Fig 1—Outline of skin incision complete showing formation of flap A

in its fascia, which above runs to the clavicle and below spreads out over the chest walls. This can easily be exposed by blunt dissection by the finger, which is now likewise inserted under the fibers of this muscle, which is now isolated as was the pectoralis major. It is also divided (Figure 3) close to its attachment to the coracoid process of the scapula. As to the pectoralis minor, like the pectoralis major, also retracts toward the chest,

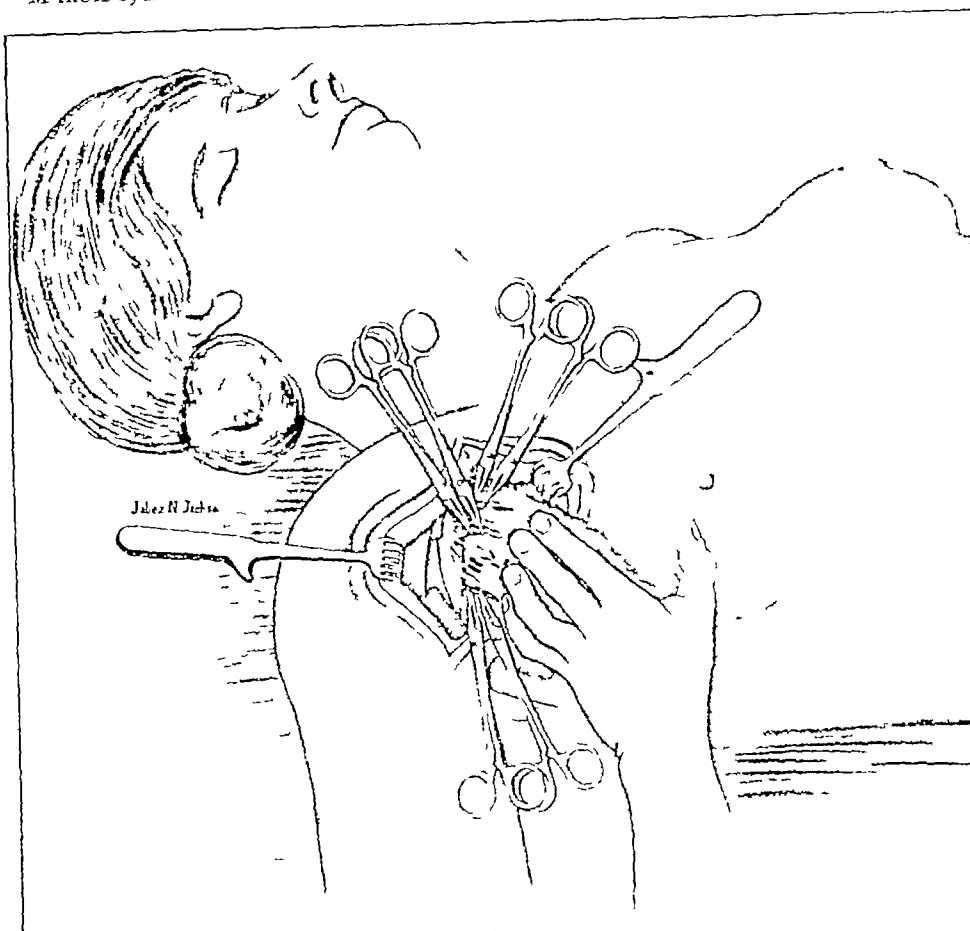


Fig 4.—Clearing fascia and glands from around axillary artery and veins, isolation at branches to fossa for primary ligature

this is being done the breast is forcibly pulled back so as to expose the deep cavity of the wound. The pectoralis muscle is now severed from beneath, close to its points of bony attachment, and the perforating branches of the internal mammary which supply the vascularity of the breast are caught as soon as divided as they come through the chest wall (Figure 6). Usually two or three of these vessels will spurt, but they can be immediately caught with forceps and later tied. After the pectoralis major muscle has been entirely severed from beneath, the breast is allowed to drop back into its normal position, the skin incision is completed and the breast and the pectoral muscles underneath are finally clearly removed. Branches of the mammary artery which are clamped are now tied and the forceps removed.

Under these circumstances the skin incision practically does not bleed.

original skin incision is also completed by carrying the horizontal incision over to the chest and marking the outer half of the ellipse so as to permit the flap to be raised and turned upward toward the clavicle (Figure 5) thus giving a deeper exposure of the attachments of the pectoralis muscle above and in front. It is important that a small tenaculum forceps should be placed at each angle of this flap when it is completed, as it will be of much service later on. The dissection is now completed usually with gauze, the tissues are loosened up underneath the pectoralis muscles under the breast and toward the chest. The point of attachment of the pectoralis minor to the ribs is cut from underneath flush with the ribs and the costal muscles. From underneath the operator now loosens up the pectoralis major to its fixed points of origin from clavicle and sternum. While

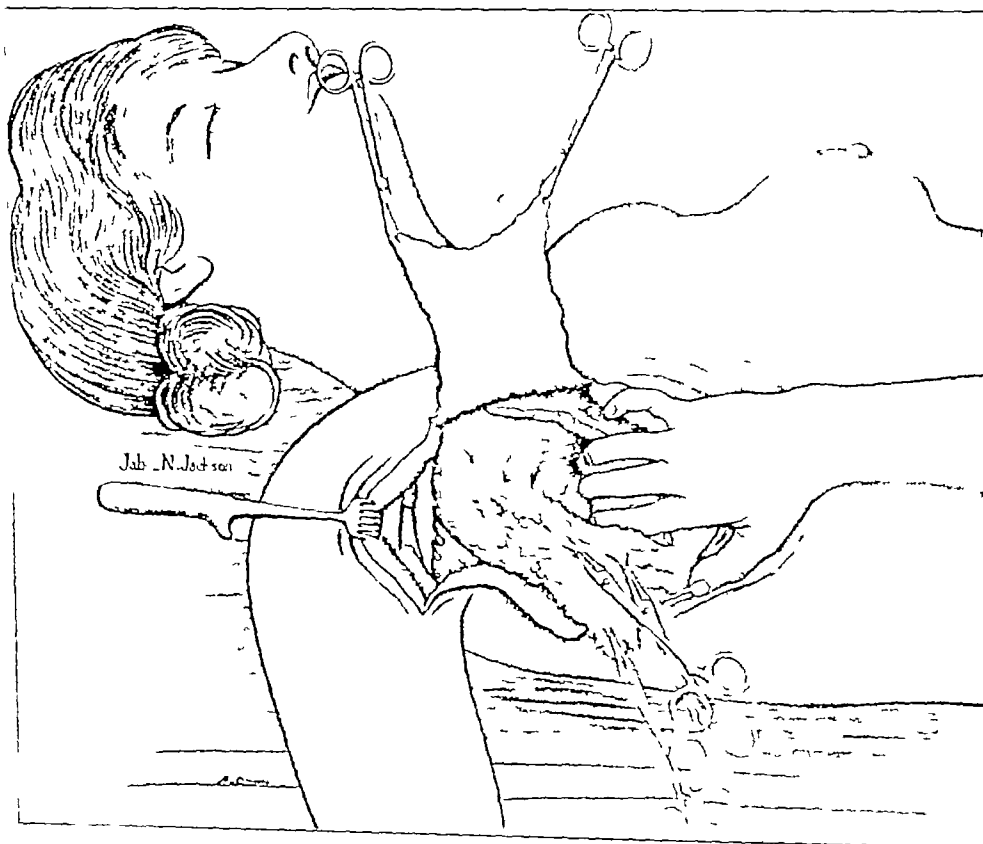


Fig 5.—Flap completed and turned upward. Branches from axillary artery and vein ligated. Dissection below continued from apex of axillary fossa downward and outward beneath retracted pectoral muscles.

at all and it will be noticed that at no time during the operation were there more than a half-dozen clamps on the wound. As a matter of fact the operation could easily be completed with from one-half dozen to one dozen clamps at the outside. This is made possible by the fact that all vessels are ligated as trunks at their points of origin instead of dealing with a large number of peripheral branches as is usual in other operations. The extent of fascial dissection in this operation is the same as in any other thoroughly radical breast amputation.

The removal of infected tissue now being complete and the wound dry, the next step is to place the flap and close the wound. These also present points of distinct originality.

The quadrilateral flap of skin and superficial fascia which originally formed the inferior covering of the axilla is now stretched out

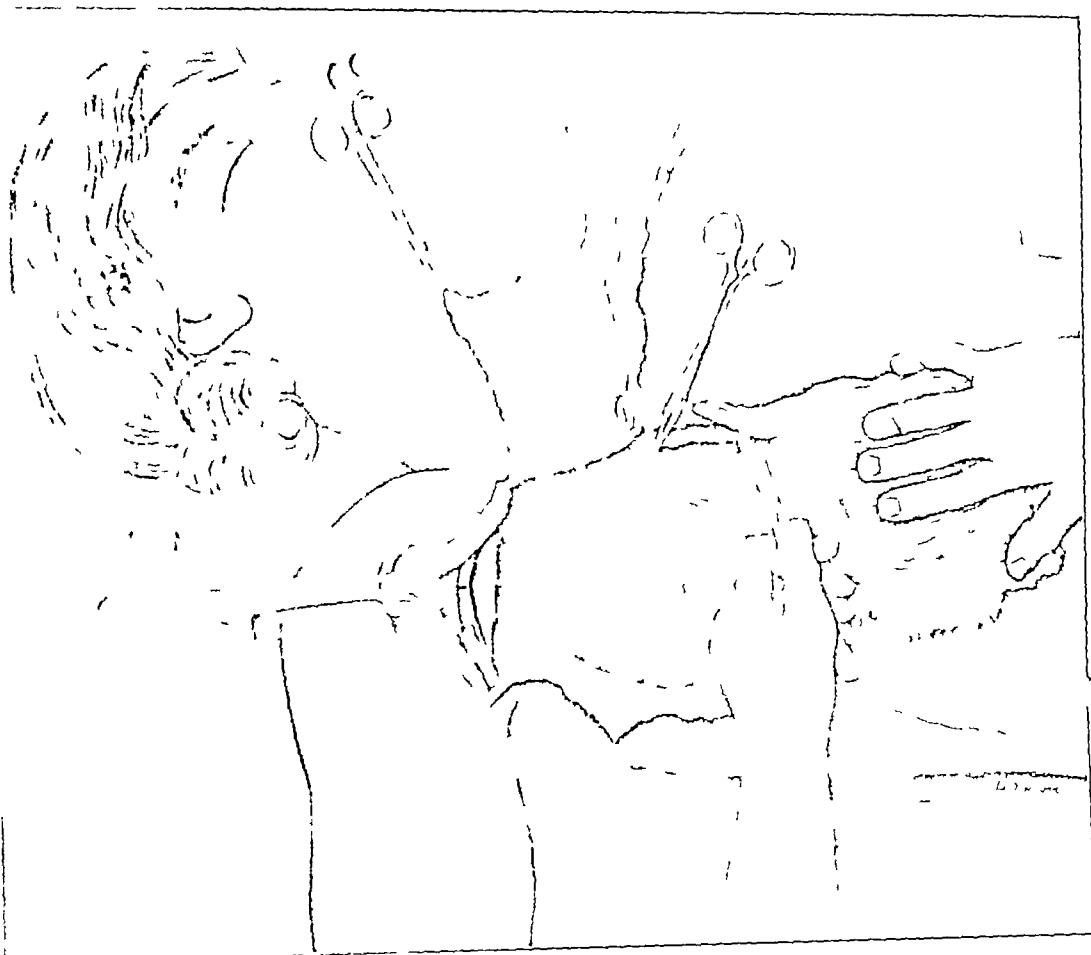


Fig. 6. Axillary dissection completed. Division of pectoral muscles at origin from beneath. Mammary branches caught and ligated on division. Amputation completed.

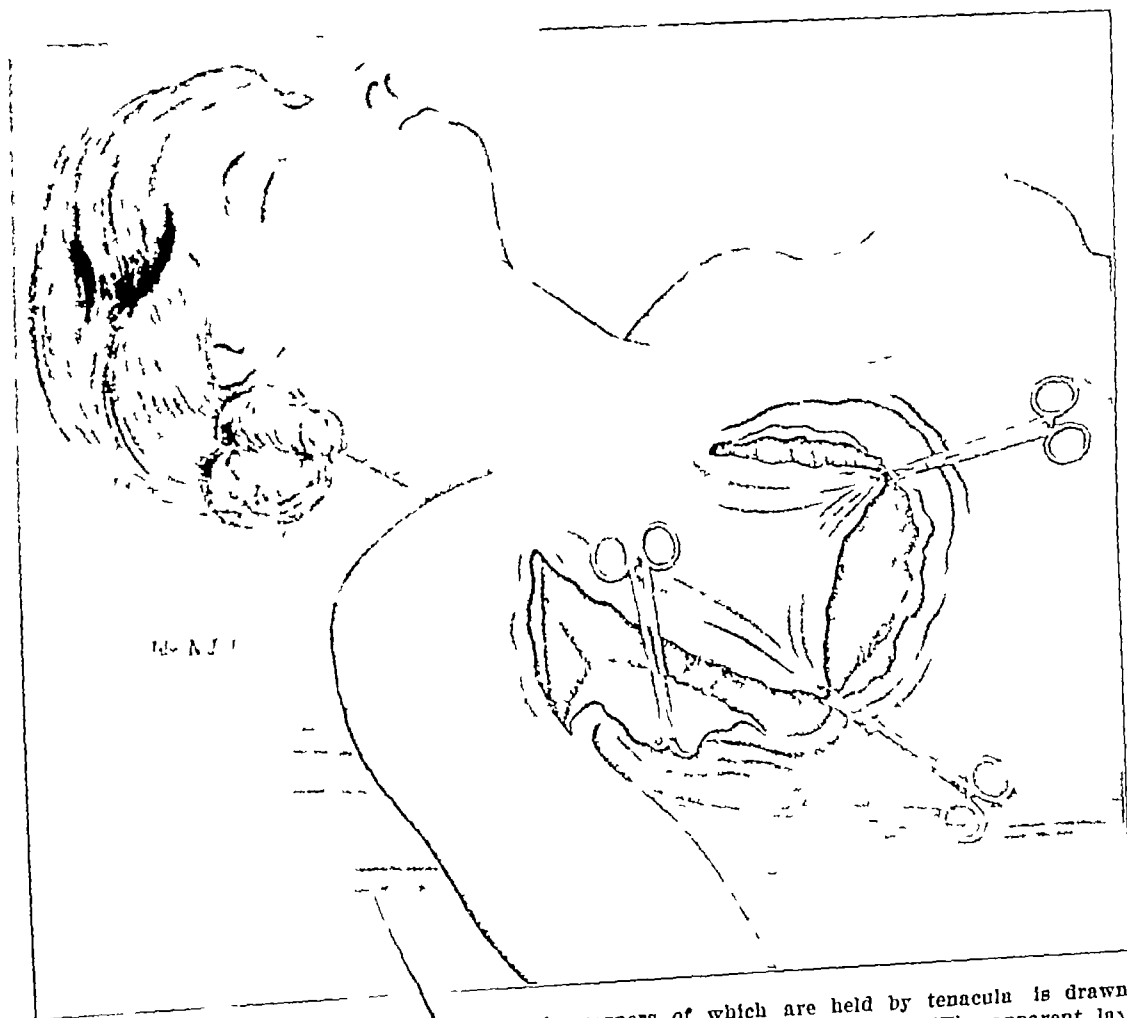


Fig. 7.—Amputation completed. Flap A the corners of which are held by tenacula is drawn over to cover the chest defect and the wound is closed by plastic adjustment. (The apparent laxity of the tissues is erroneous.)

by tenaculum forceps and transferred inward to cover the defect of the chest wall created by the removal of the skin of the breast about the nipple (Figure 7). This flap, which is one of the distinctive features of the operation, will always contract after it has been entirely loosened and will look as though it could be of but little service. A couple of tenaculum forceps in the angles, with probably another pair on either side, will spread it out until it covers a surprising amount of space.

As the flap is now drawn over on the chest, I usually fix it by attachment to the corresponding skin margin, as shown in Figures 7 and 8. Another distinctive point now consists in catching up, with the tenaculum, the margin of the lower portion of the pectoral fold, which represents the integument which formed the original floor of the axilla and which in thin

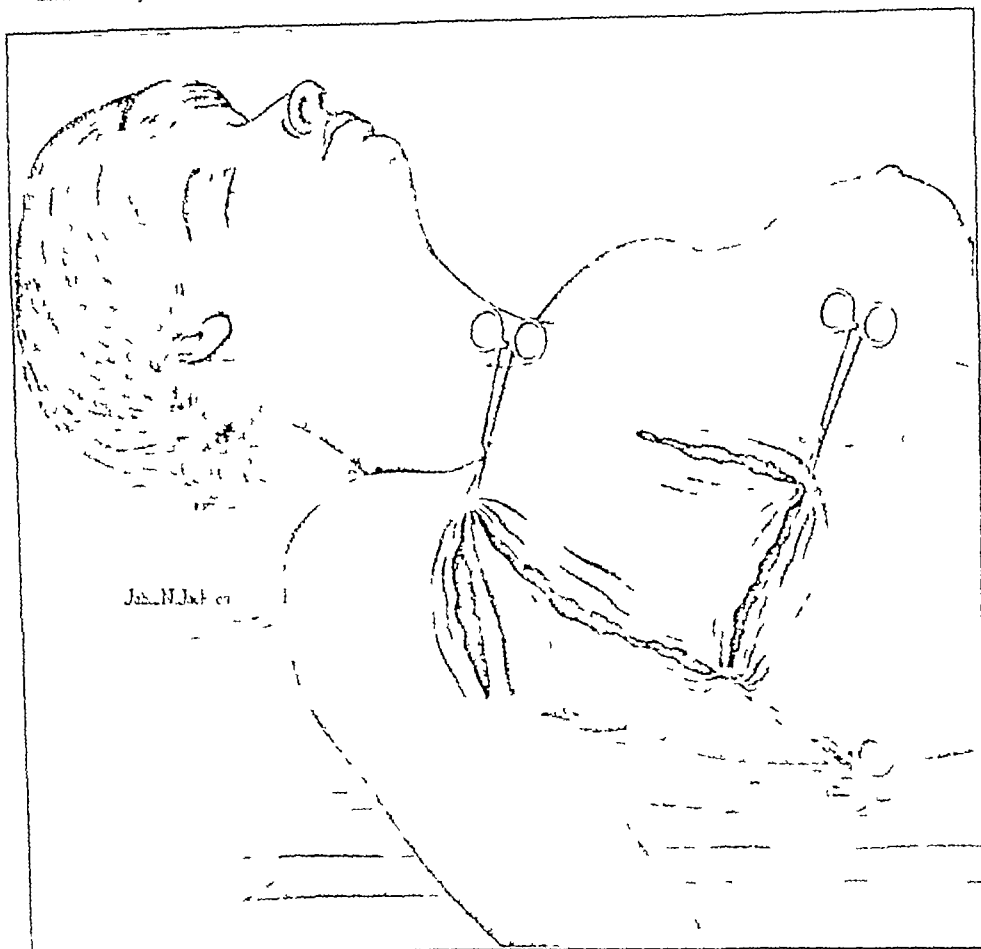


Fig 8—Flap in place and fixed by tenacula. Loose skin of original axillary floor drawn upward to complete covering and hugging about axillary vessels, thus obliterating fossa axillaris

subjects is often very marked. The tenaculum on this margin is placed at such a distance from the lowest point of the first vertical line that when drawn upward it will bring this skin point up to the original beginning of the first incision beneath the clavicle. This maneuver brings the loose skin from the floor of the axilla closely up around the axillary vessels and does away entirely with the axilla as a cavity in the subsequent anatomy of the individual. These tenacula likewise are usually clamped and mark these fixed points of coaptation as seen in Figure 8.

I generally now place an approximation suture of silkworm gut at these points to steady my subsequent suturing. The remaining portion of the incision may be closed either with interrupted or continuous sutures as desired or as I have frequently done by the use of subcuticular su-

tures of silkworm gut. It is most surprising, after this flap has been spread out and approximation properly made, how little tension there will be on the suture line. Frequently the subcuticular stitches will suffice without the use of multiple sutures. A stab puncture in the lowest recesses of the wound space behind furnishes opportunity for drainage tube.

When the operation is completed (Figure 9) it will be observed that there is an appearance which has been likened to that of a dipper, with its handle running vertically along the inner border of the arm, paralleling the deltoid, the bowl of the cup being represented by three lines, each at right angles to the other, on the chest wall. There is thus no opportunity for linear contraction interfering with the function or utility of the arm.

This operation will be much better understood by reference to the illustra-

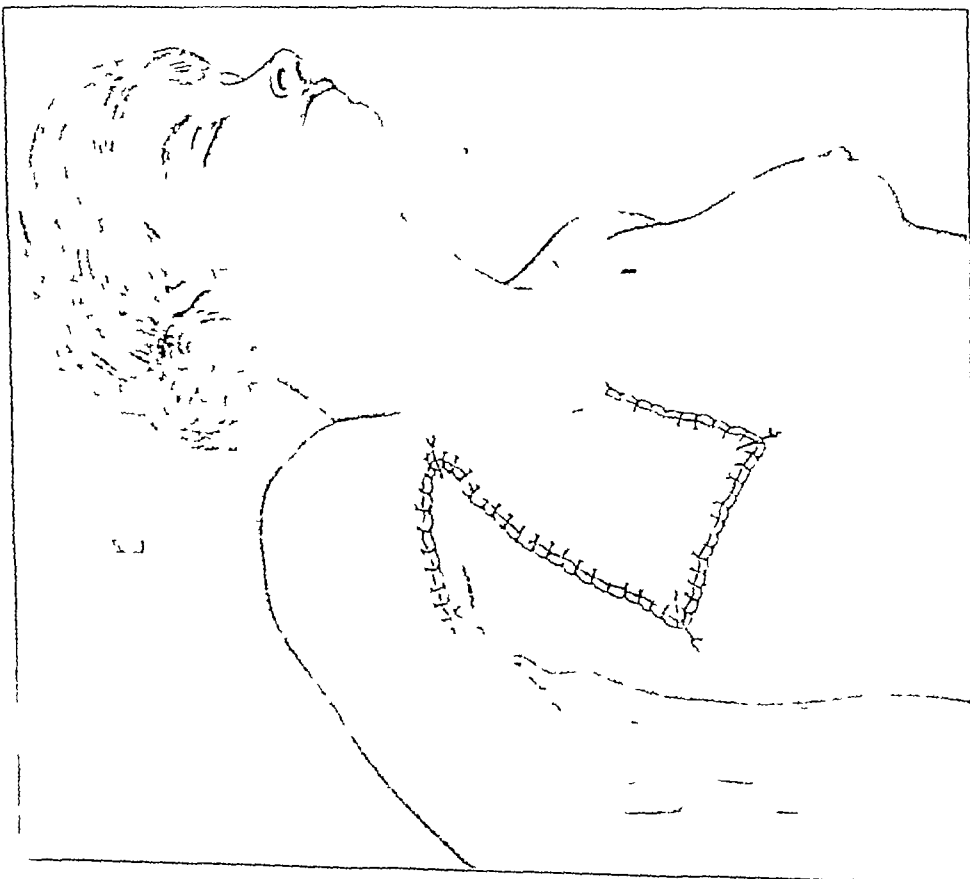


Fig 9—Suturing complete. Tension sutures at the angles. Drainage in axillary

tions which are represented herewith, and its advantages will be much more appreciated on practical trial.

In conclusion I believe that this method has the following advantages:

First The flap forms a covering for the chest defect, as a rule without any tension and thus almost entirely obviates the necessity of grafting, which is so frequent in

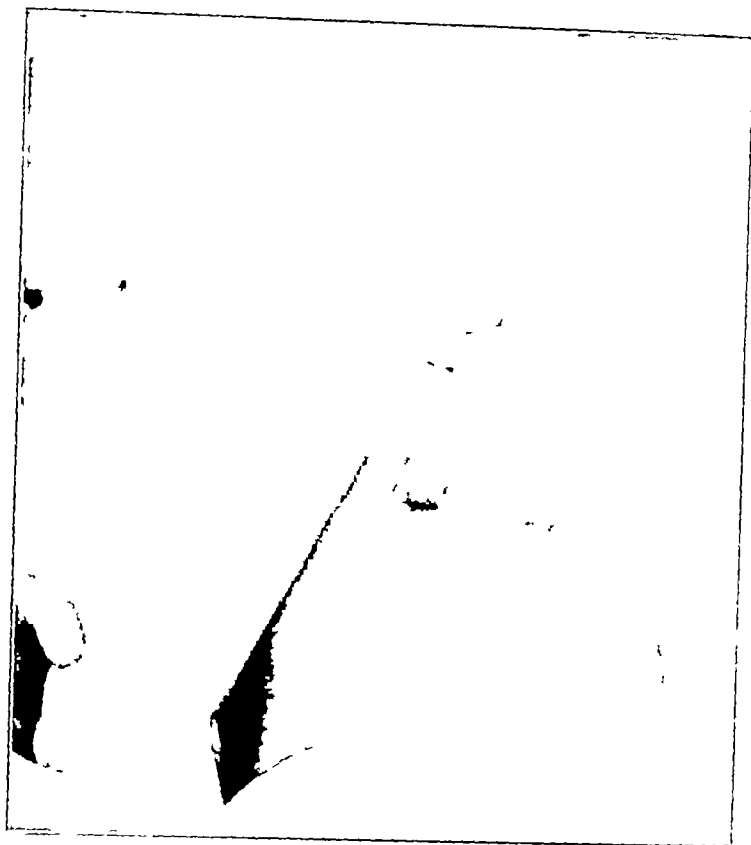


Fig 10—Case 2 Picture taken two weeks after operation

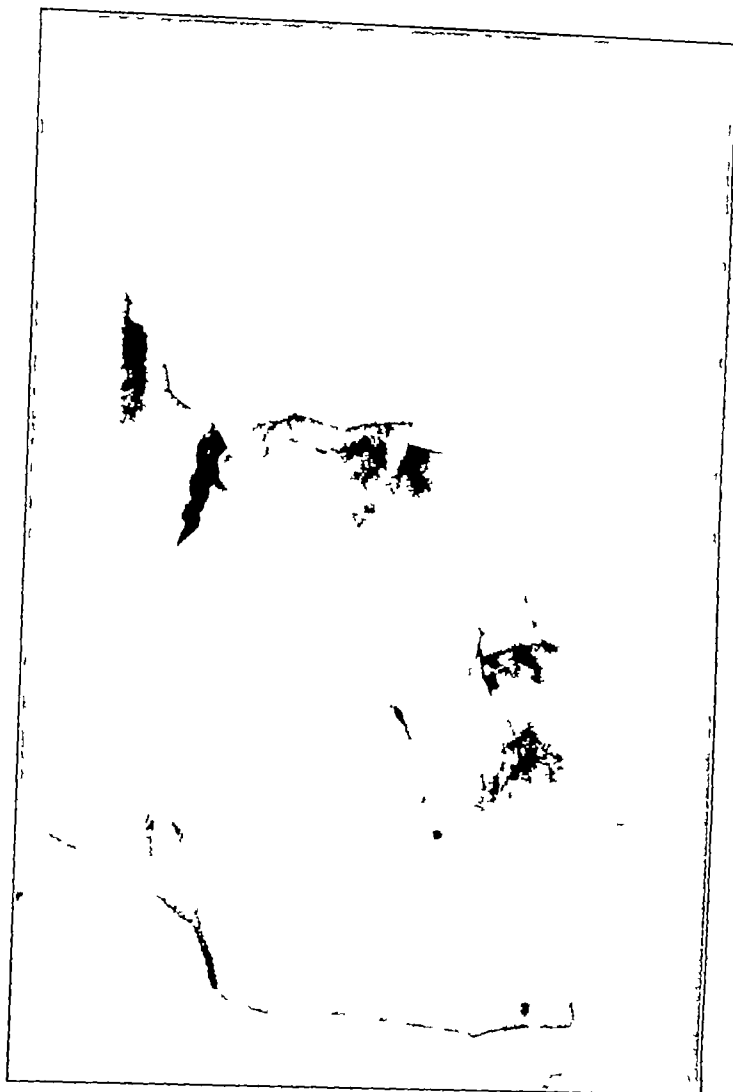


Fig 12—Case 4 Picture taken two weeks after operation

other methods. In fact, I have not found any patient operated on by my method who required grafting. Of course, this operation is not intended for cases in which



Fig 11—Case 3 Picture taken four weeks after operation



Fig 13—Case 5 Picture taken three weeks after operation
This patient shown at session of Western Surgical and Gynecological Association

there has been extensive previous ulceration or in which there is not healthy tissue for a flap of any character.

Second The drawing of the skin up to the arm does away with the axillary fossa, and thus with the large space which Nature would have to obliterate by formation of scar tissue, with the resultant pressure on the axillary vessels and nerves.

These first points are the ones which would probably be most striking to one who has not seen the operation.

Third The ligation of all vessels at their nearest point of origin does away with the use of a large number of hemostatic forceps, which cause loss of time, to say nothing of the inconvenience of having a large num-

ber of instruments in one's way. I have in no instance used more than one dozen forceps in this operation, and can usually do the work with about six. The operation is thus shortened, so that, as a rule, I find that it requires from forty minutes to one hour or thereabouts to complete it. In fact, I have never run beyond an hour, even doing the operation slowly, as I have in most cases,



Fig 14—Case 7. Picture taken four weeks after operation.

for the purpose of demonstrating this new technic, and I have done the operation in forty minutes.

Fourth. The most noticeable feature to the onlooker, when the operation is done in the manner described, probably is the marked absence of hemorrhage, so that it can almost be called a bloodless operation.

Fifth. The entire technical portion of the operation is completed before the chest is exposed by removal of the breast, therefore long exposure of an enormous area of raw chest surface, with the attendant shock, is done away with. As soon, in fact, as the breast is removed the wound is ready to be closed.

REQUIREMENTS FOR A SUCCESSFUL CAREER IN SURGERY *

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All of us can bear witness to the fact that to-day there are men engaged in the practice of surgery who, by reason of their lack of proper training, are thereby doing injustice to themselves, to the profession and to the public. Since there could be no greater mistake on the part of any young man than the selection of a specialty for which he lacks the necessary requirements, a general consideration of just what qualifications are needed as a basis for a successful career in surgery seems to me a subject worthy of discussion on this occasion.

So forcibly has this matter appealed to me for many years that very shortly after my election to this position I determined to take advantage of the opportunity of dealing with the subject on the present occasion, with the hope that my words, coming through this body of men, who are teachers of our great art, whose utterances are authoritative and whose precepts are accepted, might carry with them a certain amount of reflected authority and might serve to deter some at least from entering a field for which they are not equipped, and might even, perhaps, cause some others who are now rashly engaged in the so-called practice of surgery either to supply their deficiencies or to abandon the calling.

Although I had the privilege of hearing the oration of the chairman of the Section on Surgery and Anatomy of the American Medical Association at the Portland session, in which he treated the same subject in a most forceful, lucid and emphatic way, this seems to me no reason for abandoning my original intention, but rather a proof of the importance of the subject and an encouragement to follow up his opening, even though some similar thoughts may of necessity be dwelt on.

ATTRACTIVENESS OF SURGERY

To the recent graduate in medicine no department of his chosen profession appeals with the same force as does surgery. While a student he has been impressed by the brilliancy of the results secured by his professors before his very eyes, at the meetings of the alumni the clinics in surgery have been crowded, while those in other branches have usually been either slimly attended or else attended as a compliment to the individual holding them rather than from actual interest in the subject, in most medical colleges the prominence of the professors of surgery in all faculty affairs is well known, while, considering the more material side of the question, he has little trouble in ascertaining that it is no unusual thing for a surgeon to secure for a single operation, occupying but an hour or two or even less, a fee greater than the entire collections of the general practitioner for a week's steady work, with broken rest and with cares and responsibilities innumerable. On leaving college, if he enters hospital service, these facts are impressed on him with even greater force, and later on, having himself entered the ranks of struggling practitioners, the same lessons are borne in on him with increasing emphasis.

Little wonder is it then that so many young medical men, bearing all these things in mind, decide that they, too, will enter this alluring field, where, they believe, they will effect such marvelous results, in brilliant cures, in abundant pecuniary reward, in the homage of their fellow-men, and, if moved by even higher motives, in the actual good they may do to suffering humanity.

These young men are all too prone to see but one side of the picture and to overlook the fact that here, as in all other pursuits, success comes only as the reward of special fitness.

The term surgery is still synonymous in the popular mind with cutting, and at once calls up visions of horrors of the operating room, with its rows of glistening instruments, the nauseating odor of the anesthetic, the insensible patient and blood. Holding this view of surgery itself surgical ability is commonly held to be identical with mere deftness of operative technic, while skill and promptness in diagnosis, the recognition of the possibilities of nonoperative measures, the power to distinguish between operative and nonoperative cases, the selection of the most suitable operation, judgment

* Presidential Address Southern Surgical and Gynecological Association, Dec. 12, 1905.

in knowing just how far to go—these and numberless other things of a similar nature, which constitute the real tests of surgical ability, are given little thought.

Were this failure to draw the correct distinction between the true surgeon and the mere skilful operator confined to the lay mind consideration of this subject on the present occasion would lose its point. But these same ideas to a less exaggerated extent, it is true, find place in the minds of many of the young men for whose special benefit these remarks are intended.

PROFESSIONAL QUALIFICATIONS

In a certain sense the preparation of the future surgeon may be said to begin before his birth, since blood will tell in surgery as elsewhere. Certainly the environment of very early life has a marked influence, for here the foundations of his character are laid, and even at this time there may be awakened in him a liking for the healing art which will have much to do with his selection of a career later on.

The importance of an academic education is too well recognized to require more than passing mention. Many a man has attained success in surgery without this advantage but we are dealing with the rule not the exceptions. This academic education should be truly liberal both in quantity and quality, and should include as much as possible of studies of a scientific nature, especially biology, physics and chemistry. Of these three branches physics will prove of the greatest use to the surgeon, while biology and chemistry are branches of more practical value to the general practitioner. But the scientific habit of thought can not be too soon established, hence every study of this class is of service. At this time, too, will be laid the foundations of that general culture which will prove an invaluable possession in after life.

At the very beginning of his medical studies the best available school should be chosen. While at the medical college our future surgeon, no matter how firmly he may have decided on surgery as a career, should secure as thorough an all-round medical education as possible not neglecting those branches which, as seems to him then, are not directly related to the practice of surgery. Only thus can he attain that breadth of view which will later on enable him to realize that the patients who come under his care are subject, in addition to the condition for which he is especially consulted, to the many other ills, both medical and surgical which afflict mankind in general. Only thus can he appreciate the influence of mental conditions and gain an insight into the natural recuperative powers of the human system, both of which should be factors in influencing his decision as to the propriety of operating and in considering the question of postoperative recovery. Only thus, in short, can he hope to avoid the warping which is only too commonly seen in specialists in every branch, and which, so far as it relates to surgery, has given rise to the not altogether unjustifiable popular dread of consulting a surgeon, lest doing so should of necessity mean submitting to an operation.

After the completion of his course at the medical college a term of hospital service is nowadays considered an absolute essential. No matter what advantages the medical college has afforded in the way of clinics and opportunities for practical work, the newly-fledged doctor must learn in the school of actual experience. If he has real ability he will undoubtedly learn in private practice, but it will be only after many and costly mistakes, many of which may be avoided by proper hospital training.

In the matter of deciding what hospital he shall enter (providing it is with him a matter of choice) the personnel of the attending staff and the rules as to the duties of the house staff are the two points of chief importance. Service in the largest and most pretentious hospital under men of mere mediocrity and with improper discipline is far less to be desired than a position in a hospital where, perhaps, the cases are few, but are seen under a master, and where the intern's time is divided into terms of service in both the medical and surgical departments, in the order named if he aspires to enter the practice of surgery afterward. In the best hospitals to-day the new recruit occupies at first an entirely subordinate position, gradually being given more and more responsibility as he becomes qualified for it.

Having completed his term of hospital service, many young men find it to their advantage to undergo a still further apprenticeship as special assistant to some surgeon of prominence. This affords the opportunity to observe more intimately the methods of some single man of ability and is of further value in giving an insight into the manner of dealing with private patients, a knowledge of which often decides between success and failure.

What has been said of the necessity of other things besides mere operative ability must by no means be taken as minimizing the importance of the latter. The diagnosis having been made, and after the exercise of proper judgment in deciding as to the advisability of operating and as to what operation should be undertaken, the best surgeon is he who possesses the greatest operative skill. This, though perhaps the most easily acquired of all the accomplishments of the surgeon demands longer experience. Here, too, as in the attaining of other acquirements, the time spent as hospital interne and as assistant to some able surgeon will prove invaluable. Daily observation of the methods of others who possess the operative ability he himself wishes to attain is a prime essential. Thus will he unconsciously become familiar, in a practical way, not only with the principal operations themselves, but also with the thousand minor details which are indispensable. He will moreover, learn how to meet the many emergencies which inevitably arise during an operation and which demand prompt and decisive action, and he will have impressed on him the necessity of being ready at any stage of the operation, to modify the opinions formed beforehand and, in consequence, similarly to modify the operative procedure, either in whole or in part. He will learn how to bring to bear that nice judgment in deciding, while operating, between those cases which will admit of the most deliberate, though never dallying, attention to the minutest detail and those in which it is imperative to keep the patient as short a time as possible on the table even at the sacrifice of otherwise important details of the operation.

After this he will still have much to do before he is himself an able operator, for all things appear easy and simple when done by a master hand, and no amount of mere observation of the work of others can of itself make a good operator. Operations on the cadaver and on the lower animals are invaluable in conferring technical skill without any attendant risk to human life or well-being. Along with this he may undertake some of the simpler operations on the human subject, gradually advancing to those of greater difficulty in proportion as his experience in diagnosis becomes more extensive, his judgment more trustworthy, his eye and touch more practiced and his hand more steady.

During his entire hospital experience he will be constantly impressed with the fact that the possession of mere brilliant operative ability, unless combined with the other qualifications of a surgeon, may make a man a dangerous surgeon rather than a great one. For the same reason antiseptic and aseptic surgery, whose benefits to the human race can scarcely be overestimated, elicits to the human race can scarcely be overestimated, which they confer on surgical operations, they enable many men lacking the qualifications of a true surgeon to undertake capital operations with immunity from immediate ill consequences.

In connection with the value of the training as hospital interne a few words as to the general attitude of our young surgeon during this period of his career seem to me important. It is no uncommon thing to find even the newest recruit in hospital service undertaking to assume an importance utterly out of proportion to his ability, or, rather, in inverse proportion thereto. This is shown most prominently in the tone assumed in speaking of the members of the attending staff, finding ex-pression not infrequently in actual criticism of his superiors in the presence of his fellow members of the house staff, before the nurses, and, not infrequently, before the patients themselves. Leaving out of discussion the woeful breach of professional ethics which such a course involves, these young men should realize that they can best secure the full advantages of their hospital training by confining their attention strictly to their own especial duties. The really valuable assistant is he who does well the things falling in his proper domain. If he does these conscientiously he will have neither time nor inclination to indulge in meddlesome criticisms, and by doing his own part well he will not only inspire such confidence as will lead his superiors to entrust to him work of ever increasing importance, but he will gain insight into the responsibilities resting on a surgical assistant, which will stand him in good stead when he himself shall need help in this direction.

Having completed his college course and served his apprenticeship as hospital interne, and perhaps as special assistant, our young man is now ready to start off on his own responsibility. In some cases this step is made easy by his now being taken into partnership by the surgeon to whom he has acted assistant, but usually this is not the case and at this time he casts off from his moorings and begins an independent career. And now, no matter how thorough his training, days of discouragement are likely to follow, days during which he may be further heartened by seeing men of far inferior parts succeeding by means of tricks which he would scorn to employ or perhaps by means of some special pull. His attitude during this time should be that expressed in the words of Confucius, who said "I will not be concerned at men's not knowing me, I will be concerned at my own want of ability." If he is all right in the last respect, gradually with such work as will come his way (some of it from those who have all along been watching his career and some of it thrown in his path by his former associates), and especially, sustained by the knowledge of his own fitness and power to cope with whatever may come along, success will surely follow.

Most men at this stage of their careers find it necessary to take any kind of practice that offers. This is a fortunate state of affairs since the same reasons which made it advisable for our young man to neglect no branch of his medical studies as a student now make it important for him to require that breadth of view which

is notably absent in the man who settles down too early in life to the exclusive practice of a specialty. As his work increases he may gradually find it possible and advisable to confine his attention more and more to surgery alone.

GENERAL QUALIFICATIONS

Besides the special qualifications which have thus far been considered, it is scarcely necessary to do more than merely mention the many requirements of a general nature, which, while of essential importance in the development of the able surgeon, are of equal importance to success in any shape of life. Robust health, tireless energy, rigid honesty, temperate habits are requisites in any successful career. Attractive personality and abundant *savoir faire* are desirable here as in every calling in which one has much to do with one's fellow-men.

It may be confidently asserted that any young man equipped by nature and by training along the lines above laid down, and who has given careful thought to the selection of a proper field for his activities, may count on a reasonable measure of success as a surgeon. There are in our country to-day thousands of men who have thus risen to responsible position and who may be regarded as successful surgeons. Of these thousands, a considerable number have gone further and have come to be recognized as surgeons of prominence, while still others, a very few, have attained such eminence as to be recognized as the real leaders of our profession.

Will the means by which these last have reached their present position admit of successful analysis? Not to more than a limited extent, for here, as in all cases where we have to deal with true genius, there is an elusive something which ever eludes our grasp. Yet we can usually understand, in those instances which come under our immediate notice, somewhat of the factors which have contributed to the end. Unusual energy and determination, courage which never fails in the face of difficulties or even of temporary defeat, quickness of intellect in placing at their true value the results of research of others, thus avoiding the error of being misled by attractive fallacies, while, at the same time, promptly seizing and applying discoveries of real value, boldness of initiative, broad views in dealing with dangerous radicalism, broad views in dealing with one's patients, with one's fellow-practitioners, and with the world at large, and, lastly, that indefinable something which we call personal magnetism—these are among the factors which may serve to convert mere success into pre-eminence.

A single small class of men may perhaps constitute an exception to all that has thus far been considered. In every lofty calling in life we find a few men—at times some of the very ablest of their profession—who apparently defy all the ordinary rules which apply to their fellows in the craft. And so, as in similar cases in other fields, we occasionally find men who seem to have been born surgeons, who with no apparent external advantages over even the least favored of their fellows—save such advantages as their own persistence, urged by unquenchable fire of ambition, has wrested from adverse environment—go on to achieve not only success, but distinction and fame. These are but the exceptions which prove the rule and even to such men at the beginning of their career, the same advice should be given, since thereby the unfit man might be restrained from committing a fatal error, while he who has in him the fire of true genius will not be deterred by words of any man.

In conclusion, we must realize that this is a subject which concerns mankind in general, therefore, is it not

incumbent on us as teachers and practitioners of surgery to make it plain to the public that there is a material difference between the trained surgeon and the novice. This education will enable the public to discriminate in a wholesome manner and will ultimately have the effect of rendering it apparent to the candidate for surgical practice that he must properly equip himself before he can stand before the world as a representative of the great surgical art.

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A CRITICISM OF SOME OF THE THEORIES REGARDING THE ETIOLOGY OF GOUNDON AND AINHUM*

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IN SOUTHERN WEST AFRICA

My interest in the two rather bizarre tropical affections mentioned in the title of this paper has lately been increased by the opportunity of examining several cases of each disease. In reading over the views commonly held to account for their origin, one is struck by the fact that most of them are purely theories and, like most theories, not free from flaws. A short review of some of these may help to clarify what little knowledge we possess concerning the possible factors giving rise to the obscure conditions known as goundon and ainhum.

GOUNDON

SYNONYMS—*Anohore* (Akan name) *Honpuwe* (Gold Coast) *Gro-rie*, *Mil* (Zulu) *Mig No e*, *Dok Nosi* *Upulue* (Bantu name)

There have been proposed, among others, the following theories to explain the presence of the growths:

- 1 That they are a sequel of yaws (Chalmers)
- 2 That the condition is a disease *sui generis* (Brad-don)
- 3 That the condition is an example of atavism referable to some tribal peculiarity of the original negro stock (Strachan)
- 4 That it is a manifestation of syphilis (Friedrichsen)
- 5 That the tumors consist of malformations due to non-union of the nasal and frontal bones (Keng)
- 6 That they are caused by the presence of larvæ of insects in the nostrils (Macclaud)

The theory that goundon is a sequel of yaws has been put forward by Chalmers, Mell and others. My objections to it may be summarized as follows: (1) The only persons suffering from *uyulue* (goundon) whom I have seen in Portuguese West Africa (two in number) denied ever having had yaws showed no traces of that disease and were from a district where yaws is almost unknown, a rare imported case being noticed only at long intervals. (2) The symmetrical double growth is against this explanation. (3) Its general geographical distribution does not agree with that of yaws. (4) According to reports a much larger proportion of men than of women are affected, while in yaws both sexes are affected without distinction.

The second theory that it is a disease *sui generis* is really not an etiologic theory at all, as it attempts no explanation of the symptoms. If by the phrase is meant that goundon is due to a specific micro-organism, it is enough to reply that no such organism has been described.

Strachan's suggestion that the condition may be an instance of atavism is not reasonable in view of the fact that the structure of the tumor, according to those who have studied it most carefully, shows it to be the product of an inflammation. Strachan's observations were made, I believe, in the West Indies, and at least one of his cases was congenital.

The connection of goundon with syphilis is open to most of the objections against its identification with yaws.¹ In my own cases syphilis must be excluded, with the alternative of considering the two cases of goundon (which showed no other symptoms whatever) the only examples of that infection ever seen in an isolated interior bush tribe which I had under observation for several years. Another point is the fact that the coast tribes of southern Angola, among whom syphilis is rife, are no more subject to goundon than the people above mentioned.

The hypothesis advanced by Dr. Keng in the far East that goundon is a congenital malformation due to lack of union of the nasal and frontal bones is founded on the study of one case in which hydrocephalus developed with the tumors. A comparison of his description with my case notes leads me to believe that his case was not goundon at all. The facts that the tumors were soft and pulsating and painful when touched would alone distinguish them from the hard, bony, insensitive growths described by all observers in Africa.

Macclaud's original idea that the process is, in the first instance, set up by the presence of dipterous larvæ in the nostrils has not been confirmed by the researches of later observers. Manson points out, too, that the symmetry of the growths is difficult to account for on this hypothesis.

It will be seen by this rapid résumé of ideas regarding the cause of the peculiar affection under consideration that none of the explanations proposed rest on anything more definite than conjecture. The tumors are doubtless a hyperplasia, probably due to an osteoplastic periostitis with a very definite cause which, however, has not yet been demonstrated.

AINHIUM

SYNONYMS—*Gudnam* (W. Africa) *Quifila* (Brazil) *Banko* *Aceréndé* (Soudan) *Sukha palla* (India) *Eatêre* spontaneous *Esola* *Ombanja* (Bantu names)

I shall consider in connection with this affection the following etiologic theories:

- 1 That ainhum is a lesion of leprosy (Zambaco)
- 2 That it is caused by injuries to the toes (da Silva Lima)
- 3 That it is due to a trophoneurosis (Scheube)
- 4 That it is a circumscribed scleroderma (Corre)
- 5 That it is a congenital spontaneous amputation (Proust)
- 6 That it is the result of self-mutilation by ligatures the wearing of toe rings etc (Gongora and others)

As to the first hypothesis, I have several times lately seen the suggestion that ainhum may be a manifestation of leprosy. Some of these communications enter into the question with considerable definiteness, and in one instance several cases are cited in which all of the patients are reported to have had leprosy parents or relatives and to have evinced signs of leprosy aside from ainhum. All this is, of course, Zambaco Pasha's *redmi-*

¹ I do not here enter into the discussion of the identity of yaws and syphilis as maintained by Hutchinson and more recently by Scheube in his "Die venerischen Krankheiten in der warmen Länder," p. 51. For the purposes of this paper the clinical manifestations as seen in typical cases quite suffice.

vus This observer brought to the study of the question an unusually wide and accurate knowledge of leprosy, but seemed to have acquired a habit of annexing various complaints in order to bring them into line with his specialty. An instance in point is his contention that Morvan's disease in Brittany is only a mild form of leprosy, the virus having become attenuated through the isolation of a comparative old population. The identification of Morvan's disease as a form of syringomyelia did not, however, deter Zambaco from later claiming ainhum, on theoretical grounds alone, as another example of attenuated leprosy. The question which Zambaco proposed to himself may be stated in the words which form the title of his communication to the Academy of Medicine in July, 1896 "*L'ainhum des auteurs, constitue-t-il une entité morbide distincte, ou bien n'est-il qu'une modalité de la lèpre?*" and the verdict enunciated was "*L'ainhum des negres est une lèpre légère, monosymptomatique, dactylienne podique, c'est-à-dire mutilante des pieds*." Such a conclusion is, of course, permissible from the hypothetical side, but on clinical grounds alone it should be remembered that the ainhum-like constrictions sometimes seen in leprosy nearly always affect the fingers and are always connected with other symptoms of leprosy. One could wish, however, that the question had been approached from the pathologic standpoint. The bacillus of leprosy has been found in every tissue of the human body, except the muscles, and has a special predilection for the skin. It would certainly seem fair then, to demand a demonstration of this bacillus in at least a few of the cases exploited as *Lèpre anioide*. The fact that the geographical distribution of leprosy and ainhum (to say nothing of the racial distribution of the latter) does not coincide detracts, too, from the force of Zambaco's theory, which later authorities seem to adopt on the strength of his name and in connection with it carefully to shun any reference to *B. lepra* or other features which may be rigidly tested by scientific methods.

In this region, leprosy is not uncommon, while ainhum is comparatively rare. I have collected three cases, however, concerning which I have recently published a note containing the following observations:

- 1 In none of these cases is there a leprosy lesion demonstrable.
- 2 In none of these cases is the characteristic facies familiar to those who are acquainted with negro leprosy present, nor are there any of the other early clinical symptoms of leprosy.
- 3 In none of the three cases is there a family history of leprosy (I have seen the parents of two of the men and the father and grandfather of the third).
- 4 Only one of the patients comes from a district in which leprosy is known to exist.
- 5 In none of the cases can *B. lepra* be demonstrated in the nasal discharge by Ziel Neelson's method, and in one case in which I had amputated the offending toe no bacilli could be seen in a section of the integument from the constricted portion stained after the same method. The histologic architecture too is different from that of leprosy, showing only the familiar fibrosis and atrophy common to all cicatricial tissue.

Consequently, I must agree with de Brun (who reported the case on which Zambaco based his opinion above quoted) that "*l'absence, dans les cas d'ainhum, du bacille de Hansen semble démontrer qu'il ne s'agit pas d'une manifestation lèpreuse*."

The hypothesis originally put forth by da Silva Lima to account for the lesions was that the toes are cut by sharp grasses and the like, and the contracting cicatrix produces the condition as usually described. In opposi-

tion to this theory is the fact that the ailment has been noticed in negroes who usually wear shoes. But, as Manson remarks, "unless it could be shown that such individuals had always worn shoes this objection to the explanation offered would not apply." Another objection to da Silva Lima's theory is that the disease does not occur equally in all barefooted races. Even in Africa the geographical distribution is capricious. Again, it is stated that in Brazil ainhum is becoming less common among the negroes who nevertheless go barefooted as in former days.

Scheube's suggestion that the lesions are the result of a trophoneurosis makes no attempt to explain the origin of the condition. Such a theory is in the nature of a *tertium quid*, and only puts the difficulty one step farther back.

The view of Corre and Despetits that ainhum is a circumscribed scleroderma is open to the same criticism. Scleroderma is an induration of the skin largely due to hyperplasia of the connective tissue and muscle fibers of the corium. Its etiology is not known, although it has been connected with disease of the thyroid gland. It has also been described as following acute diseases and exposure. The local nature of the lesion in ainhum does not accord well with these views. The thyroid glands in the three patients I examined were apparently normal.

An idea advocated by some (principally by Proust) is that we have to do with amputations which come about by constrictions of amniotic filaments during fetal life. Scheube well urges against this view the facts that such amputations "are congenital and occur on various parts of the body, they are not limited to the toes, are generally multiple and frequently occur simultaneously with other deformities, they, therefore, differ essentially from ainhum."

The wearing of rings on the toes can hardly be seriously entertained as a cause. In the first place, one never sees or reads of rings worn by African natives on the little toes alone. Again, few tribes wear rings on the toes at all, and if the wearing of rings caused the affection the hands would be affected oftener than the feet. The statement that ainhum is self-mutilation through tying strings lightly around the toes is groundless and has not been confirmed.

In conclusion, the above review teaches us that no definite and undisputed cause for the lesion has been advanced. I think that there is most to be said in favor of da Silva Lima's theory. Manson puts the case to the best advantage when he suggests that the condition "is provoked, at all events in the first instance, by wounds so easily inflicted on bare feet in walking through grass or jungle. The fold of skin in which the lesion of ainhum commences is very liable, especially in the splayed-out toes of the negro, to be wounded in this way. If we examine the under surface of the joint flexures of the toes in many individuals of this race, even in those not affected with ainhum we often find the skin, particularly at the proximal joint of the little toe, thick, rough, scaling and sometimes even ulcerated. One can understand that continual irritation of this sort, produced and kept up by wounds from sharp grasses would in time give rise, especially in the dark-skinned races so prone to keloid to fibrotic changes in the derma which might very well end in a sort of linear cicatricial contraction and ultimately in slow atrophying strangulation of the affected member."

I would insist that the groove around the toe in this

affection is both macroscopically and histologically, a cicatrix. A probable factor in the prolonging of the irritations and inflammations set up by wounds and bruises at this point (which I have never seen mentioned by my writer on the subject) is the chigger *S. penetrans* which seems to have a predilection for this particular spot especially if as is so often the case the skin be cut or torn. As to the fatty and atrophic changes in the imputated toe I use the words of McFarland that then true cause is not determined, it may be trophic or it may depend on local cicatricial formations.

TUBERCULOSIS AND PATENT MEDICINES

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Since the beginning of the present campaign against tuberculosis a vast amount of literature bearing on the subject of preventive measures and cure in regard to the disease has been distributed among the laity. Besides what has been distributed by those desiring to educate the public numerous articles have appeared in magazines. Almost every writer dwells on the point that there is no medical cure for tuberculosis and everything is laid aside for the so-called outdoor treatment, which all admit is the most important part of the treatment for tuberculosis when properly administered.

In our anxiety to educate the public on the subject we overlook the result of our therapeutic nihilistic statements which often leaves the poor victim of tuberculosis convinced that a physician can give him no aid as it has been acknowledged that there is no cure for consumption. In his fight for life and health he naturally turns to those who "promise" him relief. He eagerly reads every advertisement that comes his way, and tries one "remedy" after another, for, with the consumptive while there is life there is hope. We do not have to go far to see the results. When one shark has got all the money he can out of the victim another is ready to pounce on to him with a "new cure." In this way a great percentage of the vast army of tuberculous patients becomes a revenue to the "patent-medicine" shark and the advertising quack with his "sure-cure" and fake testimonials. That percentage is increasing every day through our means of false education, and the advice of the attending physician is set at naught, because patients have been pre-educated and taught the false doctrine that outdoor life is all that is required and "the doctor can do nothing to help cure consumption."

During a conversation recently with a prominent pharmacist he made the statement that sales in patent medicines had fallen off 50 per cent in the last three months, and incidentally remarked that he seldom sold certain preparations except to consumptives. "They will drink any old thing so long as it is advertised to cure consumption." Now, on the one hand, we are endeavoring to educate the public in regard to the dangers of patent medicines and their uselessness, while, on the other in trying to educate the masses as to the dangers of spreading infection and the best means to cure a certain disease, we are driving a certain class of individuals into the folds of the "patent-medicine" vendor and the advertising quack.

To be sure, we have no specific remedy for tuberculosis to the exclusion of every other remedy or measure. Nor have we for any other disease. What would be the

result in a case of tetanus were we to rely on a few injections of tetanus antitoxin without a knowledge of its action and how to use it in the different stages of the disease or in suspected tetanus infection? What would be the mortality in diphtheria were we to simply administer a dose of diphtheria antitoxin and then leave the patient to do as he deemed proper? Antitoxin has a specific action in diphtheria, but notice the anxiety of the attending physician and the special care he takes of his patient for several days, watching for the various complications which may occur, ready to check them if they appear.

Other acute diseases, such as pneumonia and typhoid fever, are caused by micro-organisms, and we have no specific remedy for them, but we do not preach broadcast over the land that there is no medical aid that can be given to patients suffering from such diseases. That these individuals require the care and advice of skilled physicians is a fact that none will dispute.

Tuberculosis is a slow disease, often requiring years to destroy its victims. It is also a disease with a tendency to recovery if recognized early and properly handled and during its long course the patient needs the advice and care of the skilled physician until the disease is arrested, and then supervision is required for some time after.

What does a layman suffering from tuberculosis know about recurrences, aspiration pneumonia, pleurisy with effusion, empyema, etc? He does know that when certain of these conditions occur in the course of his disease, that he feels worse, and, if he be one who has lost faith in his physician through our newer education, he straight way goes and "fills up" on some dope containing opium or alcohol, perhaps both. We all know the results.

Climatic resorts to which consumptives flock seeking a return to health are a bonanza for the advertising quack and "patent-medicine" vendor. The stock argument of these sharks is that members of the medical profession have no cure for tuberculosis, and that physicians acknowledge this while each of these "quacks" claims to have some "great" secret remedy discovered by some "eminent" man and that it is a "sure cure." The poor consumptive is only too ready to grasp at any help that may be offered him, and in the present condition of things these are the only men who "offer" anything, so far as a great many of the public see.

The high percentage of "cures" or arrested cases in sanatoria does not depend on the patient getting better air or nourishment than can be had elsewhere, but on the constant supervision of the patients by skilled physicians and the proper administration of therapeutic measures suited to the requirements of the individual patient.

Up to the present time only a small percentage of those suffering from tuberculosis have been treated in sanatoria in this country, and the balance are scattered over our broad land in all conditions and stages of the disease numbers of them vainly hunting for some one to hold out a hope of relief. Is it any great wonder that the uneducated or falsely educated easily fall a prey to the advertising quack?

It would be well for the community at large if some of our therapeutic nihilists would turn their talents in some other direction, and if they wish to write for the education of the laity, write on some subject which the laity may understand and be benefited thereby.

The medical profession, as a whole, is an educated body and will eventually work out the therapeutics of tuberculosis, as it has in other diseases. In the mean-

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time individual physicians will use the knowledge and skill they possess, as they have always done, for the welfare of their tuberculous patients and the community at large teaching hygiene and prophylaxis and guiding their patients to renewed health

SURGICAL REPAIR OF INJURED NERVES *

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The principles of nerve suture are so intimately connected with degeneration and regeneration of peripheral nerves that a brief review of the histologic process involved may not be inappropriate. The method of regeneration of a mixed nerve has been the subject of much discussion, and even now there is no view that receives the general sanction of neurologists. The Wallerian or continuous theory, which claims that regeneration of the axis cylinder occurs from the central stump only, is being somewhat discredited. Recent researches tend to confirm the discontinuous theory or some of its modifications. Huber and Howell, in 1892, and later Bethe of Strassburg, have shown quite definitely by numerous experiments that in young animals regeneration of an injured nerve may be practically complete without any connection with the central end. In older animals regeneration without connection with the central stump also occurs, but is imperfect. Schutte,¹ after an exhaustive review of the literature, corroborates this and maintains that degeneration always occurs after division of a nerve, no matter how accurate the approximation or clean the wound, though degeneration and regeneration may proceed simultaneously. As would be expected, the destructive effect of suppuration increases degeneration in the central end. While Schutte concludes that central connection is not necessary to regeneration in a peripheral nerve, it is true that such connection with the so-called trophic center must sooner or later be made in order to preserve the nerve in a healthy condition. Of course, there can be no physiologic function without this, no matter how perfect the anatomic repair may be. It is also true that regeneration is more prompt and more nearly perfect when the peripheral and the central ends are united than when they are separate.

It has been shown by a number of investigators that if a severed regenerated nerve is again cut degeneration will take place in the distal segment, but the segment between the first and second cuts will not degenerate to any marked extent though it has been entirely separated both from the cord and the peripheral segment. There seems to be no satisfactory explanation of this phenomenon, but its occurrence shows that neither the ganglionic cells of the spinal cord nor the peripheral nerve endings are essential to regeneration—a fact that might prove valuable where there had been multiple injuries along the course of a nerve.

In view of the constant degeneration of the peripheral segment of a divided nerve, it is somewhat difficult to explain the early return of function in many cases. Thus Victor Horsley² mentions a case of suture of the ulnar nerve followed in twenty-four hours by return of

sensation in the little finger. Peterson³ reports a case in which the sciatic nerves of a dog were used to bridge a defect in the ulnar and median nerves in man with return of sensation the day after the operation. Two weeks after the operation, sensation was almost complete and the natural color of the hand was restored. There are many other reported cases following a somewhat similar course. Victor Horsley says they may be explained as follows: If a nerve is cut and the freshly divided ends are united two excitable masses of nerve protoplasm are brought into contact, and one may conduct stimulating impulses from the other just as when two freshly divided pieces of muscle are fixed together; excitement of one piece will produce contraction of the second by transmission of the electric energy which caused contraction of the first piece. For a few days after suture of a nerve the excitability of the nerve protoplasm remains active, then it gradually disappears as a rule though occasionally it is permanent.

SYMPTOMS

The symptoms of an injured nerve depend to some extent on the character of the injury. Complete aseptic division of a mixed nerve results in abolition of motion and sensation in the area supplied by this nerve and in simple atrophy, but no trophic disturbance, such as glossy skin or blebs, results. If, however, the lesion is an irritating one, trophic symptoms may appear, though the destruction of the nerve is only partial. Such disturbances occur after suppuration involving a nerve, or the gradual encroachment of a tumor or callus, or after constant pressure from a dense cicatrix. Pain is not present if the destruction of the nerve is complete and of a non-irritating nature. When the whole nerve is not severed, or if the lesion is of an irritating nature, pain may be severe and is due to the abundant supply of sensory nerves to the nerve sheath, which are not only excited by the injury, but stretched by the resulting vasomotor paralysis along the nerve. Electrical reactions, either galvanic or faradic, depend on the ability of the nerve to functionate to some extent. A nerve that has completely degenerated can no more convey electrical stimulation than could a fibrous cord, yet the fact that such stimulation fails to produce a contraction does not necessarily mean the complete absence of all nerve fibers, for some may exist, yet be so few in number and so feeble in conducting power as to produce no appreciable reaction.

TIME OF OPERATION

The time which should elapse after traumatic paralysis of a nerve before operation for its relief is a question of much importance. B. Sachs⁴ says three and a half months after facial palsy is too soon to consider operation. Dr. Hammond mentioned the case of a boy who developed facial palsy after a mastoid operation, and, without any attempt at nerve suturing, motion in the affected muscle was first noticed 15 months later. Henriksen⁵ thinks it unwise to wait over a month if there is no improvement. Others advise waiting as long as 18 months before operating. Much depends on the character of the injury. If the nerve has been divided by a clean cut, as after a stab wound, and primary union has resulted, the surgeon would be justified in waiting 12 or 18 months for the normal functions to return, but if the injury was a crush, or if suppuration resulted,

* Read before the Southern Surgical and Gynecological Association, Louisville, Ky.

¹ *Cent. d'Anatomie Pathologique*, vol. xv, p. 917.

² *Practitioner*, August, 1899.

³ *American Jour. Med. Sciences*, April 1899.

⁴ *The Journal A. M. A.*, vol. xlv, p. 1142.

⁵ *Lancet*, April 18, 1903.

two or three months should be all the time allowed to elapse without improvement. When there is compression, as from callus or a tumor, operation should be performed at once. No operation for nerve suture should be abandoned because of the length of time that may have elapsed since the trauma. While regeneration and good functional results are more liable to occur when there have been only a few months from the time of the injury to the date of operation, still a number of successful cases are reported where many years have elapsed since the injury. For instance, Brenner⁸ records a case in which successful suturing was done on the median nerve 10 years after the original injury.

METHODS OF OPERATING

Before mentioning the different procedures used for the repair of defects in nerves, it may be well to call attention to the statement of Bowlby⁹ that the function of some nerves in the same individual is restored more readily than that of others. He says better results are obtained after suture of the peroneal or the musculo-

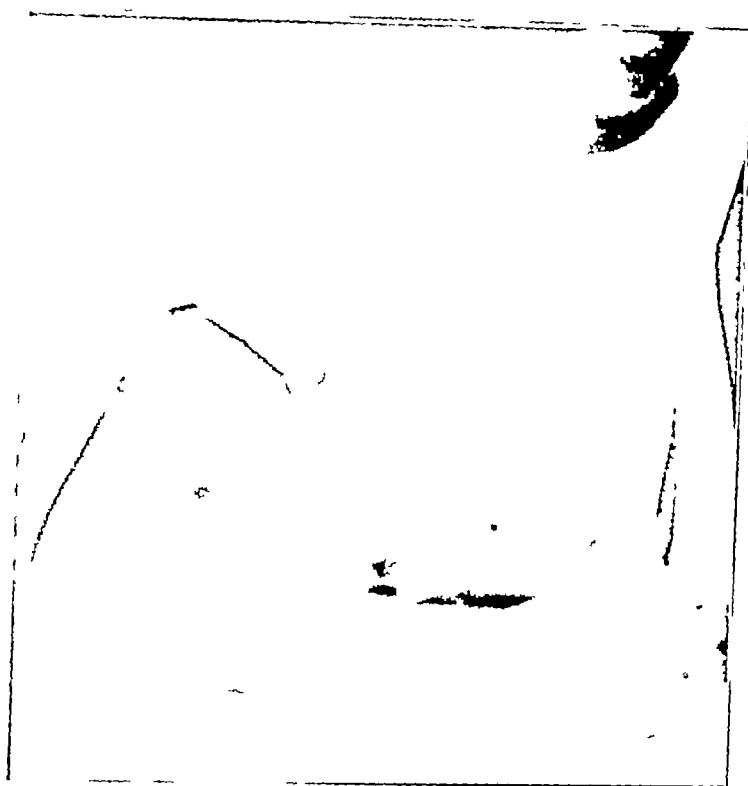


Fig 1—Taken January 1905 about two weeks after the second operation and fourteen months after the first. This photograph shows the scar over the musculo-spiral and the hand flexed as far as possible at that time.

spiral nerve than after suturing either the median or the ulnar. If this be true it would not be accurate to compare results following one method of operating on the musculo-spiral, for instance, with a different method employed on the median, as the same operation that succeeded in the nerve whose function was easily restored might fail in a nerve more difficult of repair.

The surgical methods of repairing nerve defects may be classed as follows: 1 Simple suture 2 Flap operation 3 Nerve bridging 4 Nerve implantation or anastomosis.

1 Simple Suture—Under the head of suture are included not only those cases in which the ordinary technic of freshening the ends of the nerve and approximating them with fine sutures into the nerve substance and into the sheath is employed, but also cases in which other procedures are necessary to facilitate this approxi-

mation. Resection of a portion of the long bone has been done when it was found impossible to coapt the nerve ends in any other manner. Dr C A Powers⁸ has collected from the literature seven such cases, two of these operations being performed by Keen. Surrounding the site of the nerve suture by some kind of tube—tubulization—is advocated by a few writers and has been employed by Guelliot and by C Foramiti. Foramiti⁹ uses the artery of a calf for this purpose. It may be employed fresh when it is taken aseptically from the calf and immediately used after rinsing in salt solution, or the artery may be boiled and then hardened in a formalin solution. It is claimed that such a procedure prevents adhesion of the nerve to surrounding tissue, and at the same time affords a direct path for the nerve fibers. Aside from the difficulty of securing a proper tube, the greater danger of suppuration following its introduction and the interference with the nutrition of the nerve are serious objections.

2 Flap Operation—Flap operations consist of splitting from one or both ends of the nerve sufficiently long flaps to bridge the defect and suturing them together. There are a few successful cases reported, though this method is not popular, as too much healthy nerve tissue is sacrificed in making the flaps. Most of these operations have failed.

3 Nerve Bridging—The term "nerve bridging" may be applied to that class of operations in which some for-



Fig 2—Taken January 1905 about two weeks after the second operation and fourteen months after the first. Note the dull and crumpled appearance of the nails of the index and middle fingers as compared with the other nails, also the enlarged and glossy appearance of the distal joint and the last two phalanges of both of these fingers.

ign substance is used to bridge the defect between the two ends of a divided nerve. Dr Powers, in a most interesting article,¹⁰ reports a case in which he filled the defect in the external popliteal nerve of a man by transplanting four inches of the sciatic of a dog. The nerve was taken from the dog and immediately transplanted. The wound healed primarily, and 45 days later all forms of sensation were reported normal, but the muscles supplied by this nerve would not react to the strongest faradic current. Eight years after the operation, sensation over the region normally supplied by the peroneal had practically disappeared and the muscles remained entirely paralyzed. Powers has collected from the literature 21 cases in which nerve tissue from a lower

⁸ Annals of Surgery, vol xl, p 642

⁹ Archiv f klin Chir, vol lxxiii, No 3.

¹⁰ Annals of Surgery, vol xl, p 682

animal was used to correct defects in a human nerve, and of these cases only 21 per cent may be said to have terminated in a satisfactory way. He concludes that nerve bridging or transplanting should be discarded.

The nerve tissue transplanted from lower animals in all probability has no intrinsic value in repairing defects in human nerves, but merely serves as an organized tissue would under similar conditions in providing a path for the growing nerve fibers to follow, so protecting them from the surrounding tissues. The suture *a distance*, where several strands of catgut connect the ends of a nerve, involves exactly the same process and should be included under this head.

4 Nerve Implantation or Anastomosis—The term "nerve implantation" may be applied to operations in which the peripheral and the central portion of an injured nerve are implanted into a neighboring healthy nerve, or in which the peripheral end only is so implanted. While nerve implantation has not been performed so frequently as nerve bridging, the results have been more encouraging, the proportion of successes being about 50 per cent. I do not include those operations for correction of deformities following such diseases as infantile paralysis, where the lesion is in the spinal cord and the nerve fibers are secondarily involved through their whole extent, but merely those cases where there has been some local injury to a peripheral nerve. Be-

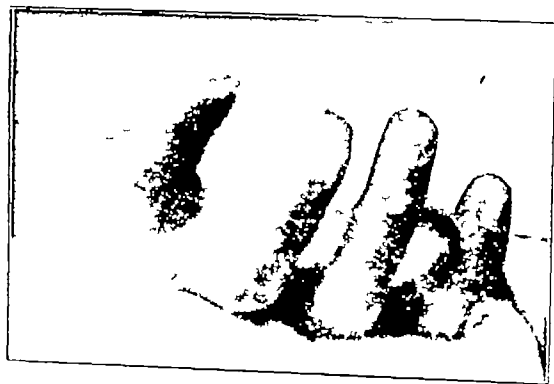


Fig 3—Taken Nov 16 1905 about ten months after the second operation and two years after the first. Nails of index and middle fingers are short from loss of substance at tips of these fingers from previous ulceration but are smooth and of normal color. Size and appearance of distal joints and phalanges of these fingers are about normal.

sides the clinical evidence, a number of experiments have demonstrated the feasibility of such an operation as implantation. In an experiment by Spitzzy,¹¹ the peroneal nerve was grafted onto the tibial. The clinical results were good, and microscopic examination of the site of the grafting plainly showed the passage of fibers from the tibial nerve into the implanted distal portion of the peroneal. As between the last two methods of correcting defects in nerves (that is, nerve bridging and nerve implantation), a study of the literature on this subject both from an experimental and a clinical standpoint, seems to show the superiority of nerve implantation.

The following case of nerve implantation may be of interest both from a surgical and an anatomic standpoint.

Patient—H J, aged 21 years, was kindly referred to me by Dr George Ben Johnston. He was a large muscular negro, whose previous health had been good. Family history was of no significance.

History—In August, 1903, he was thrown some distance by the explosion of a boiler. There was a fracture of the leg, a scalp wound and a severe trauma to the soft parts of the upper right arm. The bone was not fractured, nor was the shoulder dislocated, and the skin was only broken at a small place on the outer side of the arm. He was unconscious for several hours, but on recovering consciousness found his right hand and forearm paralyzed.

Examination—Nov 17, 1903, he came under my care. His other injuries were nearly well, but so far as could be made out complete paralysis of both sensation and motion existed in all of the forearm and hand except in those muscles supplied by the ulnar nerve and that portion of the skin supplied by the ulnar and the musculo cutaneous nerves. In the upper arm the action of the triceps was unimpaired, but flexion was weak. Besides marked atrophy no trophic disturbances were present.

Operation—An incision was made over the upper part of the



Fig 4—Taken Nov 10 1905 about ten months after the second operation and two years after the first. Note good flexion of fingers and hand also slight keloid development at scar over the median at the last operation. Just above this is part of the scar of the first operation.

course of the median nerve. The upper brachial artery was obliterated and no trace of the median nerve could be found. In the place of the nerve and artery was an indistinguishable fibrous mass. The ulnar nerve was normal. After extending the incision down to the middle of the arm the median nerve was found. It was in fairly good condition here, but the line of demarcation between healthy nerve tissue and an absolute fibrous cord was quite sharp and distinct. The median from its origin for a distance of two and one half inches had been completely crushed and its sheath, with the remains of the brachial artery, formed a fibrous mass, in which no trace of nerve tissue could be found. It was impossible to stretch the nerve or to form a flap to bridge such a defect, so implantation into the ulnar was done. The median was cut almost across half an inch below the point where it first appeared healthy and the peripheral end sutured into a nick in the ulnar. A fine needle and fine chromic catgut were used, one suture being put into

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tism is a disease that is first, and in the great majority of cases autotoxic and that the autotoxic agent is probably some form of suboxidation due to toxic invasion from the alimentary canal, just as gout is produced by toxic invasion from the alimentary canal, secondly that acute articular rheumatism is often complicated by microbic invasion but that the infection is secondary to the conditions wrought by the disturbed metabolism and made possible by them. Recognizing this theory, early proper treatment will promptly relieve the case and in almost all cases the secondary infection can be prevented and thus the more dangerous complications be prevented or greatly modified.

TREATMENT

There can be no jugglery in the treatment of this disease, the least digression from a few of the points mentioned means disaster, skepticism as to the existence of a successful treatment of acute articular rheumatism and the prevention of its complications is based on errors of diagnosis. By eliminating these errors of diagnosis and rigidly carrying out the treatment indicated, one will be eminently successful. Cases complicated by cardiac involvement are cases complicated by infection and one must recognize this element in treatment. I realize that in the treatment on which I insist there is one element very difficult to obtain especially for those engaged in country practice. I refer to the bath tub. Without the tub there will be more or less failure. To a certain extent this can be overcome by some improved hot-air apparatus.

I have been profoundly impressed by the importance of two elements in the treatment—first, the prime necessity of limiting the quantity of food taken and the withdrawal of all proteid or vaultum-forming foods, and, secondly, with the prime importance of the care of the skin and profuse elimination from all the emunctories.

First—Place the patient in bed between dry woollen blankets, wearing a light night gown, with open sleeves fastened with safety pins. Keep the bed clothes dry at all times and never cold and clammy, give him absolute rest and plenty of dry, warm air in a sunshiny room.

Second—Withdraw all food until the alimentary canal has been thoroughly emptied and cleansed, then for the first few days employ a strictly skim milk diet, then begin to allow stale bread and milk products. If milk is not well taken, cereal foods and buttermilk may be used. The carbonated waters often assist the difficulty in taking milk. Exclude all tea, coffee, coco and chocolate in the acute stages. When the patient has passed the acute stages he may gradually begin the use of fish, oysters, cottage cheese and the white meat of barnyard fowls, carefully returning to the proteid articles of diet and immediately abandoning them on a reappearance of the arthritic symptoms. Easily digested green vegetables, such as new peas, string beans, lettuce, asparagus, spinach and a small quantity of baked and mashed potatoes are allowed. Exclude all acid and sweet fruits. Oranges are freely allowed. It will be well to keep watch of excessive amounts of starchy foods and heavy sweets.

Third—Give a vigorous dose of calomel, follow this with epsom or rochelle salts, and thereafter keep the bowels moving from two to four times each twenty-four hours with the salts or some other agreeable form of saline laxative. I am partial to the magnesium sulphate.

Fourth—Give tub baths. Place the patient in water at 98 degrees, after he has been in the tub five min-

utes, add hot water gradually to bring the temperature to 100 or 102 degrees. Keep patient in the bath fifteen to twenty-five minutes, as he will bear, guarding against sensation of faintness or marked depression. Give patient skin friction, massage and passive movements entire time he is in the bath, in the order named. In removing patient from the bath be careful not to expose the skin to the air, quickly throw a dry, warm sheet and blanket around him, and get him into bed between dry, warm blankets. Now pack hot bottles about him and gradually bring on free perspiration, keeping this up from three-quarters to an hour and a half.

Fifth—Now begin to give ten to fifteen grams of sodium salicylate with a glass of alkaline mineral water every two hours. Half a glass of milk may be given with a little seltzer water in place of the full glass of water if sodium salicylate causes great gastric disturbances. I seldom employ more than two drams of sodium salicylate in the twenty-four hours, and deem that dose sufficient for almost all cases. Under the treatment so far outlined one will be surprised at the size of the dose of sodium salicylate one can give without getting the customary toxic effects and gastric disturbances. Experience proves that patients taking hot baths with free elimination can take large doses of depressing drugs without the usual toxic effects, and it is very seldom that I am compelled to modify my dose of sodium salicylate. Now, as soon as the patient improves and gets comfortable, try to lengthen the interval between doses and continue the work along the line of reduction.

Sixth—Flood the system by the internal administration of large quantities of an alkaline mineral water, giving it to him at regular stated intervals. If mineral water is not at hand, employ pure water, holding sodium bicarbonate or potassium citrate in solution. Keep the urine alkaline or neutral by the administration of alkaline mineral water.

Seventh—Locally apply hot fomentations to the affected joints, or wrap in cotton batting or wool and apply a splint.

Eighth—Unless the weather is warm, dry and free from sudden changes, keep the patient in bed for at least a week after the temperature has become normal. Caution him against exposure. It is astonishing how little exposure will bring on another attack within a week or ten days following an apparent recovery.

Now, this is an incomplete discussion of this disease and the scope of this paper does not admit of going into all the details and of discussing the changes in diet, treatment, etc., in the subacute and possibly chronic stages. Before closing, however, let me add the caution to get rid of the salicylate as soon as possible and to substitute the syrup of iodid of iron and Fowler's solution, as these patients become very weak and often markedly anemic. Also, one should not adhere forever to the non-proteid diet. The patient will do badly, recover slowly and poorly, so go back to a mixed and proteid diet as soon as possible, watching for a possible recurrence of the arthritic symptoms.

Peritoneal Adhesions—Jeans calls renewed attention to those not infrequent cases where gastrointestinal symptoms followed some time after an apparently slight injury to the abdomen. These symptoms include rebellious colics, vomiting, constipation or diarrhea, without other evidences of organic disease. When the presence of adhesions simulates ulcer, gallstones, etc., operation with loosening of the adhesions is indicated.—*Denver Medical Times*

SPINAL ANESTHESIA BY MAGNESIUM SULPHATE

A REPORT OF SEVEN OPERATIONS PERFORMED UNDER ITS INFLUENCE

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EXPERIMENTS ON ANIMALS

In several series of experiments on animals¹ it was established that magnesium salts have very distinct anesthetic properties. Among other things it was established that by local application of solutions of magnesium sulphate on nerve trunks the conductivity and excitability of motor and sensory nerves can be temporarily abolished, that by subcutaneous injection of certain quantities of magnesium salts general anesthesia with complete recovery could be produced in several species of animals, and, finally, that by intraspinal injections into animals of comparatively small doses of a solution of magnesium sulphate a complete anesthesia and paralysis of the posterior part of these animals could be produced.

These latter experiments interest us here particularly and we shall dwell on them a little longer. The experiments on dogs, cats and rabbits have demonstrated that by application of solutions of magnesium sulphate to the spinal cord, either through an opening made by laminectomy or through lumbar puncture, the sensibility and motor power of the posterior extremities became greatly impaired or were even completely abolished. The experiments on these animals, however, were not entirely satisfactory. In lumbar puncture in these animals the cord was sometimes unavoidably injured, which marred the results, and the injections through a laminectomy opening had the disadvantage that a part of the solution escaped again through the opening and that the quantities used could, therefore, not be measured exactly.

In monkeys, however, lumbar puncture can be carried out nearly with the same degree of safety and reliability as in human beings, and the experiments have here given uniform results. The injection of a solution of magnesium sulphate in a dose equal to about 0.06 (one grain) of the substance to one kilogram weight of the animal would cause, within a few minutes, complete paralysis, and anesthesia and paralysis would spread upward, reaching neck and head, and the animals would then lie in a state of stupor and paresis. The monkey, which an hour before was fighting and biting every one who came near him, would lie now perfectly limp, offering not the slightest resistance. The vital reflexes were not affected, heart beats were not changed, only the respirations were slightly slowed. The animal would remain in that state for many hours, but on the following morning would be found completely recovered. A few animals stood several consecutive injections at comparatively short intervals apparently without any after-effect. A dose four times as large as the one above mentioned proved fatal to the animal.

From the experiments with intravenous injections the observation should be mentioned here that solutions of

magnesium sulphate are very toxic, even in small doses, especially when injected at a rapid rate. The toxic effects, however, are essentially confined to the function of respiration, heart and blood pressure, if the dose employed was not too large, remain practically unaffected. In animal experimentation, therefore, an intoxication with magnesium salts does not necessarily lead to a fatal issue, on the contrary, the most stubborn respiratory paralysis has been successfully overcome by patiently and perseveringly carrying out proper artificial respiration, i. e., insufflations of air into the trachea by the methods commonly employed in physiologic laboratories.

SPINAL ANESTHESIA IN HUMAN SURGERY

The question now arose: Could intraspinal injection be employed in human surgery? Spinal anesthesia seems to be now a well-established method. Its history is of very recent date. It began with the lumbar injection of cocaine². Influenced apparently by the International Medical Congress in Paris (1900) and by the enthusiasm displayed by Tuffier for the method and the drug, spinal cocaine anesthesia soon began to be employed abroad and in this country extensively. This widespread activity, however, was soon followed by a reaction against the method. Bier himself was one of the first to warn against its indiscriminate use. Cocaine proved to be poisonous even in very small doses. (It is a noteworthy fact that spinal cocaine anesthesia was not tested in experiments on animals before its employment in human surgery.) Eucaine did not give better results.

Recently, however, the pendulum began again to swing in favor of spinal anesthesia. Stimulated by the observations of H. Braun on local anesthesia, Bier and others found that the addition of suprarenal extract makes cocaine more available also for spinal anesthesia. Furthermore, in stavain, a new synthetic product of the cocaine group, a drug was introduced which is somewhat less effective, but it seems to be also less poisonous than cocaine. Judging from the number of favorable reports which we now find in the surgical literature on long series of operations carried out under spinal anesthesia by one or the other method, the conclusion seems to be justified that spinal anesthesia as a method has now come to stay.

USE OF MAGNESIUM SALTS

Could magnesium salts also be employed by this method in human surgery? We felt convinced that an attempt to test it was thoroughly justified for the following reasons. As stated above, in animals standing nearest the human species, in monkeys, spinal anesthesia by magnesium salts has given complete satisfaction, there was complete anesthesia of the posterior part of the animal, which was followed by complete recovery, and the experiments have shown that even repeated anesthetization of the animal by this method left no after-effects. Also, the dose which was amply sufficient to produce complete anesthesia was only about one-fourth of the fatal dose—a latitude between the anesthetic and the fatal dose much greater than in most of the other anesthetics. Moreover, the danger which might come from the administration of magnesium salts was not through failure of heart or blood pressure, but only through impairment of the respiratory function, a danger which is amenable to relief by artificial respiration efficiently carried out. The fact that magnesium is not

¹ The experiments were carried out at the Rockefeller Institute for Medical Research by Drs. S. J. Meltzer and John Auer. *Amer. Jour. of Physiol.*, vols. xiv and xv, also *Amer. Medicine*, Nov. 25, 1905. And S. J. Meltzer, *Medical Record*, Dec. 16, 1905.

² L. Corning 1894. A. Bier 1898.

hours after the operation, could certainly not have been due to anything else but to the magnesium salt. Even the general anesthesia which set in late in these cases was undoubtedly, in the main, due to the intraspinal injection, since the small amount of chloroform which was employed in these cases could never produce such an after-effect. In Case 1 the patient apparently could have been operated on even at that early hour without chloroform. The absence of any noteworthy after-effects in this case was surely due to the washing of the spinal canal. The washing of the canal, although carried out at a comparatively late hour, proved to be beneficial also in the seventh case, the respirations increased and all the after-effects were perceptibly shortened. In Case 4 as well as in Case 6 there was a stage of analgesia which permitted the operation, although the tactile sense was not abolished.

Case 3 has shown that a dose of 1 cc of the solution of magnesium sulphate to 30 pounds body weight is insufficient to carry out an operation by its aid alone, although it apparently supported in a measure, the effect of the chloroform.

In Case 5 even a dose of 1 cc of the solution to 20 pounds body weight had only a moderate anesthetizing effect. This patient was an alcoholic, 57 years old, with markedly developed arteriosclerosis. Possibly alcoholism as well as arterio-sclerosis, interferes in some way with the anesthetizing effect of the magnesium salt. Possibly also there is an individual predisposition for or a resistance to the anesthetizing effect of magnesium. Our impression is that it affects younger individuals more readily than older ones.

2. It seems that the spinal injections caused a rise of temperature in all the cases. Although in the majority of the cases there were some other reasons for the appearance of fever, the setting in of the rise of temperature at about the same time and the similarity of the course of the fever in all cases made it probable that the intraspinal injection was essentially the cause. This is the more probable, since it was observed also in intraspinal injections of other substances. The course of the fever, however, was in all cases perfectly benign and disappeared after 36 or 48 hours. The pulse remained always of good quality.

Vomiting occurred in most of the cases. In Case 7, in which no chloroform was employed, vomiting occurred only twice and lightly, and only at an early stage. The frequent vomiting in Case 2 was probably not due to the intraspinal injections. It is noteworthy that in most of the cases the postoperative vomiting had only the character of regurgitation (no contraction of the abdominal muscles).

4. There was retention of urine, lasting between 24 to 48 hours, in nearly all the cases. The bowels also had to be assisted by enemata. The incontinence of feces of the first case was due to the involvement of the sphincter in the operation. We have to point out again that in Case 4, in which the spinal canal was washed immediately after the operation, there were practically no after-effects.

As far as seven cases permit any conclusions, the following statements may be made. Intraspinal injection of magnesium sulphate is capable of producing anesthesia, and, if carried out with caution seems to be a safe anesthetic. The following plan would seem the best, at least for the present. To inject about 1 cc of a 25 per cent solution of magnesium sulphate for every 18 or 20 pounds body weight and wait about 2 hours. It is

probable that by that time the analgesia will be sufficiently advanced to permit the performance of an operation on any part of the lower half of the body. A small dose of chloroform, however, should be administered to divert the patient's attention and to hasten and complete the anesthesia. Immediate washing of the spinal canal should follow the operation in all cases.

A more extensive experience will show whether this method could be used also as a means for general anesthesia for operations on the upper part of the body. It goes without saying that the solutions should be sterile, the salt chemically pure, and the patient handled with proper surgical care.

Special Article

THE PHARMACOPEIA AND THE PHYSICIAN CHAPTER X

LOCAL DISINFECTANTS AND ANTISEPTICS

Lister's use of local antiseptics in surgery is usually spoken of as a discovery, but, without detracting in any way from the credit due to Lister, it should be referred to more correctly as a practical application of previous discoveries.

Reichenbach, in 1832, obtained a substance from wood tar which he named creosote. Finding later that it consisted of phenol and phenol ethers, and also finding these same substances in smoke, he concluded, and later conclusively proved, that to them is due the meat preserving activity of smoke.

Runge, in 1834, found that the phenol which he obtained from coal tar also possessed the power of preventing putrefaction. Tar and a number of products of a similar nature were long ago recommended and widely used for foul smelling ulcers, but the fact remains that to Lister is universally, and very properly accorded the distinction of having placed antiseptics in surgery on a sure basis. Since the early days of antiseptics there have been many improvements, and we now know that the most perfect cleanliness, or asepsis, that is attainable is much to be preferred even to the most elaborate antiseptics.

It is, of course, entirely beyond the scope of this series of papers to consider the details of major surgery, but the principles of antiseptics which obtain in this branch are equally applicable to minor operations, and their disregard by many, who are not surgeons, is the best justification for their present brief consideration. The necessity of scrupulous cleanliness is seen in such a simple, but admittedly important, procedure as vaccination. The careful physician will perform even this comparatively simple operation under aseptic conditions, thereby saving himself much annoyance in case of accident.

The first, and really the most important, duty of the physician with regard to infections is to see that he does not carry them to other patients. There can be no doubt that physicians have played no small part in the spread of infectious diseases, particularly in the past, but fortunately, with the better understanding of the subject, this seldom occurs now.

The disinfection of clothing and of instruments belongs to the subject of general disinfection, that of the hands and person to local disinfection.

The cleansing of the hands, as it is done in a number of American hospitals, is about as follows: "Trim and clean the nails, wash the hands and forearms for five minutes in very warm, sterile water, using green soap and scrubbing them energetically with a brush or a gauze pad, cleansing the nails again during this part of the process. Rinse the hands for three minutes in 75 per cent alcohol, to remove soap and to aid in sterilization, then in 1 to 1,000 solution of mercuric chlorid, or in a solution of 1 to 2,000 mercuric chlorid with 1 to 40 phenol, and finally rinse in sterile, warm water." This may be somewhat more elaborate than is necessary in most cases of minor surgery, but even here it is well to err on the safe side.

For the disinfection of the whole body a full bath in warm water with the liberal and judicious use of soap is sufficient, and the clothes may undergo disinfection separately at the same time. This procedure is so simple that the physician can not escape blame should he carry infection from one patient to another through the omission of necessary precautions.

When minor surgical operations are to be performed it is always well to thoroughly disinfect the surface at and around the prospective seat of operation. For this purpose the procedure given for cleansing the hands of the surgeon is sufficient, though in some cases it may be found necessary to supplement the soap and water with oil of turpentine.

Wounds and ulcers require disinfection to destroy those bacteria which can be reached, and antiseptic dressings to prevent the development of colonies from those which escape destruction or which may afterward reach the spot.

AQUA HYDROGENII DIOXIDI—U S—Solution of Hydrogen Dioxid, or, as it is frequently called, Solution of Hydrogen Peroxid, is useful for decomposing pus, in which bacteria are protected from the action of other disinfectants. It thus secures the rapid cleansing of freely exposed pus cavities or ulcers, and at the same time it acts powerfully on bacteria, though they are not all destroyed so long as any pus remains. The official solution is equal, in disinfectant power, to a 1 to 1,000 solution of mercuric chlorid. The action on pus of hydrogen dioxid is so extremely rapid that it frequently detaches small masses which may escape decomposition.

The use of this solution is not unattended with risks, particularly in sinuses or deep, partially closed wounds. Mucous membranes decompose hydrogen dioxid rapidly, and the skin slowly, with the liberation of nascent oxygen. It is not certain whether the bactericidal property is due to the liberation of oxygen alone, or whether the preparation possess a special influence on the micro-organisms. The decomposition whereby the oxygen is liberated is supposed to depend on a ferment, catalase, which is widely distributed, and, as the preparation loses its bactericidal powers, once the oxygen has been liberated, it is of course useless as an antiseptic, though extremely useful as a disinfectant. Hydrogen dioxid has an especial reputation in the treatment of sore throat and even diphtheria, for which it is used as a spray or as a gargle with entire safety. It attacks metals readily, and only rubber or glass should be used in connection with it. Diluted with an equal amount of water, it is an excellent mouth wash, but not infrequently contains a little acid, and the mouth should be rinsed after its use.¹

After the disinfection of ulcers and wounds an antiseptic dressing is applied. Cotton, gauze and lint impregnated with various antiseptics are found on the market. Only the active substances that are used in this connection will be discussed, as the application of dressings belongs to surgery.

IODOFORMUM—U S—Iodoform, Tri iodomethane, is usually obtained by the action of iodine on alcohol, in the presence of an alkali or an alkaline carbonate. Iodoform was discovered by Sérullas, in 1822, but was not used in medicine until some time after 1837. Despite its disagreeable penetrating odor, iodoform continues to hold first place among local antiseptics, used for the dressing of wounds. At first it was supposed to share with chloroform (from which it differs chemically only in the iodine displacing the chlorine) a strong antiseptic action, but in the case of iodoform, this has been found to be but slight. It is however, materially increased by the slow liberation of iodine. When its local use as a dressing is long continued, enough of it may be absorbed to produce poisoning, which does not, however, result in a typical narcosis, such as chloroform produces, but gives rise to disturbances of cerebration, headache, delirium and other symptoms. These are due to the iodoform molecule, but exanthemata, which are sometimes severe, are usually attributed to the liberated iodine, which, when liberated, is thought to circulate in the blood as an alkaline iodid or in combination with albumin. Hematuria,

albuminuria and urinary casts may also result from its absorption, and many attempts have been made to find a substitute for iodoform without its poisonous effects.

Some surgeons deny that iodoform exerts any direct antiseptic power, and attribute the benefits from its use to its limitation of the secretion on which the bacteria would otherwise develop. Binz observed that iodoform lessened the emigration of leucocytes, and it is said to be particularly useful in local affections with free secretions.

When iodoform is intended for use as a dusting powder, its odor may be rendered very much less disagreeable by incorporating with it 4 per cent of coumarin. The following has been used to some extent:

R	Iodoformi	3v	20
	Coumarin	gr	xv
	Acidi borici q s ad	3xiii	50

Misce bene Sig To be used as a dusting powder

Pulvis Iodoformi Compositus (N F), containing Iodoform 20, boric acid 30, naphthalin 47, and oil of bergamot 3 parts, also constitutes a useful and comparatively unobjectionable antiseptic dusting powder.

Where iodoform is to be used in the form of an ointment the addition of from 5 to 10 per cent of balsam of Peru, or of 2 per cent. of oil of anise has been found to be advantageous. The addition of oil of anise, in somewhat larger quantities, has also been recommended for iodoform gauze, particularly when the gauze is to be used in appreciable quantities or for any continued length of time. If the antiseptic action of iodoform is due to the liberated iodine, then necessarily many of the proposed substitutes must be practically devoid of antiseptic power, since the iodine is too firmly bound to be liberated by the tissues.

IODOLUM—U S—Iodol designated chemically as tetra iodopyrrol, one of the recent additions to the Pharmacopeia, illustrates this particular condition very well. The iodine in this case is so thoroughly combined that the substance has been recommended as being comparatively non-toxic. Another class of preparations, such as nosophen, losophan and europfen, depends for the antiseptic action largely on the cresol or the phenol compounds united to the iodine. Loretin and vioform are combinations of iodine and quinolin, and there is no reason to suppose that they have any advantages over the other preparations just mentioned.

THYMOLIS IODIUM—U S—Thymol iodid, much better known by the formerly trade-marked name "Aristol," is a condensation product of two molecules of thymol with two atoms of iodine, and more properly, therefore, should be designated by its true chemical title, di-thymol di iodid. This preparation, which really belongs to the phenol group of iodine compounds, has met with a better reception than many of the other iodoform substitutes. It is probable, now that the patents have expired on aristol and the substance is available at much more reasonable prices, that its popularity and use will be extended still further. This, however, is problematic. Schmiedeberg specifically states that aristol, losophan, soziodol, pierol, loretin and antiseptol, all of which contain iodine, are not more actively antiseptic than are the corresponding iodine free compounds, while the latter are, of course, much less expensive. Since the number of possible combinations of this type is practically unlimited, we will do well to exercise circumspection in accepting those which appear from time to time.

PHENOL—U S—Acidum Carbolicum (U S P, 1890) is hydroxybenzene, and may be obtained from coal tar by fractional distillation and subsequent purification, or may be made synthetically. In its pure state it occurs as colorless, needle-shaped crystals, or as a white crystalline mass.

PHENOL LIQUEFACTUM—U S—Liquefied Phenol, Liquid Carboic Acid, contains from 85 to 89 per cent. of absolute phenol, and is the form in which this substance is usually seen and used.

Phenol or carboic acid is now used as an antiseptic dressing for wounds very much less frequently than it was some years ago, because of the danger of poison due from absorption. It may be applied in the form of a 2 per cent solution in water, stronger solutions are used, but many cases of gangrene

¹ An agreeable and at the same time efficient, mouth wash is obtained by mixing equal parts of aqua hydrogenii dioxidi liquor antisepticus (U S) and a saturated solution of potassium chlorate.

have followed the use of even dilute solutions on the extremities, particularly the hands, for a continued length of time.

A sharp distinction is to be drawn between the anesthetic and antiseptic uses of phenol. Solutions of phenol in oil, or mixtures with fats, are excellent anesthetics when brought in contact with painful surfaces or wounds, but they possess very little antiseptic action, because phenol is more soluble in fats and oils than in water or weak saline solutions, hence it does not leave the oil to penetrate the bodies of bacteria, without doing which it does not injure them.

Practically the same holds true of its affinity for alcohol, and it is for this reason that alcohol is such an excellent antidote for carbolic acid externally as well as internally. The absorption of phenol is followed by its appearance in the urine, which usually becomes dark greenish or nearly black in color.

CRESOL—U S— and its more desirable form

LIQUOR CRESOLIS COMPOSITUS—U S—Compound Solution of Cresol, has been mentioned under general disinfectants. The latter compound has been extensively used, particularly in the form of one or the other of the numerous proprietary preparations, as a local disinfectant and also as an antiseptic. The saponaceous properties of this particular preparation make it very useful in a variety of instances in which a detergent action is to be attained in addition to the disinfection.

THYMOL—U S—This is a phenol occurring in the volatile oil of *thymus vulgaris* and in some other volatile oils. It possesses strong antiseptic properties, but its comparative insolubility in water, 1 in 1100, has interfered materially with its extended use. Thymol iodid, the only official combination of thymol, has been referred to in connection with iodoform substitutes.

An ideal disinfectant or antiseptic dressing for wounds, should act strongly on the living protoplasm, should be slowly absorbed, and should affect the central nervous system but slightly after absorption. Phenol has the disadvantage of being rapidly absorbed and of profoundly affecting the central nervous system. Thymol being but slightly soluble in water, but volatile at ordinary temperatures is slowly absorbed, and, as its excretion keeps pace with its absorption, there is little danger that it will exert a poisonous action when used locally.

RESORCINOL—U S—Resorcinum (U S P 1890), a diatomic phenol that is usually referred to by its popular name, resorcin, was at one time extensively used in dermatologic practice, but is now seldom employed except for scalp diseases and sometimes internally.

PYROCATTON—U S—This is better known as Pyrogallol Acid and is a triatomic phenol, sometimes used in dermatologic practice.

ACIDUM SALICYLICUM—U S—Salicylic Acid has been used to some extent as a local antiseptic, particularly in the form of dusting powders, diluted with talcum, zinc oxid or boric acid. Salicylic acid is used extensively in dermatologic practice, particularly in the form of ointment. It is only slightly soluble (1/310) in water.

The practice of dermatology involves a special knowledge of antiseptics, and the subject can be given only general consideration at this time, so that we must content ourselves with little more than a simple enumeration of some of the official substances that are used, merely suggesting the number and variety of the available materials.

PIX LIQUIDA—U S—Tar, a product obtained by the destructive distillation of the wood of one of several species of *Pinus*, has been widely used in the treatment of skin diseases, usually in the form of an ointment.

UNGUENTUM PICIS LIQUIDÆ—U S—Tar ointment contains 50 per cent of tar.

OLEUM CADINUM—U S—Oil of Cade, or Oil of Juniper Tar, is a product of the dry distillation of *Juniperus Oxycedrus* and is closely allied to tar, being used in the same way.

BALSAMUM PERUVIANUM—U S—Balsam of Peru has already been noted under expectorants. Its antiseptic properties are probably due to the benzoic and cinnamic acids which it contains. It is used in dermatology, either in ointment or in collodion.

NAPHTHALENUM—U S—Naphthalene or Naphtalin and **BETANAPHTHOL**—U S—Naphtol, are used in dermatologic practice, though the former, at least, has practically fallen into disuse for medicinal purposes.

Among other substances having antiseptic properties, used locally, is

SULPHUR PRÆCIPITATUM—U S—Precipitated Sulphur. This and the other official forms of sulphur have been mentioned in connection with cathartics. Sulphur constitutes a most important agent in the treatment of a number of skin diseases. It is applied either in the form of lotions or of ointments. For the former, precipitated sulphur is usually preferred, while in ointments either

SULPHUR SUBLIMATUM—U S—Sublimed Sulphur, or

SULPHUR LOTUM—U S—Washed Sulphur is used. In the official

UNGUENTUM SULPHURIS—U S—Sulphur Ointment, 15 per cent of washed sulphur is directed to be used. This ointment is now only half the strength of that formerly official and is, therefore, better suited as a mildly stimulating antiseptic application.

SODII THIOSULPHAS—U S—Sodium Thiosulphate, better known as Sodium Hyposulphite, is another useful antiseptic that is now little used medicinally, except in dermatology. It is freely soluble in water and is usually prescribed in the form of a lotion. It is said to be particularly useful in the destruction of parasitic fungi.

GLYCERINUM—U S—Glycerin is not alone useful as a mild antiseptic, but is also extensively used as a vehicle for many other substances in the treatment of skin lesions.

GLYCERITUM AMYLÆ—U S—Glycerite of starch is a preparation that was introduced many years ago to serve as an ointment base in cases in which lard or fat might prove objectionable.

Mercurials

HYDRARGYRI IODIDUM RUBRUM—U S—Red Mercuric Iodid or Bimiodid of Mercury is the most active of all the official germicides and antiseptics. It is comparatively expensive, however, and is only slightly soluble in water.

HYDRARGYRI CHLORIDUM CORROSIVUM—U S—Corrosive Mercuric Chlorid, Bichlorid of Mercury, Mercuric Chlorid, or, more popularly, Corrosive Sublimate, is by far the most popular and most generally used of all local chemical disinfectants and antiseptics. It is extremely poisonous and many fatalities have occurred from its use, even in the vagina and in the washing of wounds. Gauze impregnated with a solution of mercuric chlorid is often placed over small or closed wounds to prevent the access of bacteria. It is widely used as an antiseptic and disinfectant, but it is extremely caustic and can not be applied to mucous membranes and to open wounds except in very dilute solutions, for fear of absorption.

Mercuric chlorid is slowly but completely soluble in 13 parts of water and in 3 parts of alcohol. The solubility of this substance in water is much facilitated by the presence of other soluble chlorids. This fact has been utilized in the preparation of the commercial tablets of mercuric chlorid that are sold for making antiseptic solutions. These tablets usually contain about 0.5 gm (7.5 grains) each of mercuric chlorid and ammonium chlorid, the sal alembroth of the alchemists, which, when dissolved in 500 c.c. (1 pint) of water make a solution of 1 to 1,000. This solution is useful for the disinfection of the hands, for walls and floors and for many fabrics that are not injured by water.

Mercuric chlorid attacks metals and therefore must be avoided with metal instruments. It is a very popular insecticide and a number of the mercurials are used as parasitocides, notably for pediculi. For this purpose, however, the various ointments of mercury are preferable.

UNGUENTUM HYDRARGYRI—U S—Mercurial Ointment, contains 50 per cent of mercury.

UNGUENTUM HYDRARGYRI DILUTUM—U S—Blue Ointment, a new addition in this edition of the Pharmacopeia, contains 33 per cent of mercury and conforms more closely to the proposed international standard for mercurial ointment. Another ointment that is sometimes used as a parasiticide is

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UNGUENTUM HYDRARGYRI OXIDI RUBRI.—U S—Ointment of Red Mercuric Oxid, or Red Precipitate Ointment, containing 10 per cent of red mercuric oxid.

Antisepsis of the Mucous Membranes

The antisepsis of the mouth is important, not only because of the infectious diseases pertaining to it, but also because of the excellent opportunity that is afforded to micro organisms to multiply there in enormous numbers on the particles of food in the cavities of teeth or wedged between them. That this is true is shown by the putrid smell acquired by particles of meat which remain but an hour or so in the mouth. The extent to which bacteria may increase may be inferred from the calculation, given by Novy, that 30,000,000,000 contain less than one-sixth of a milligram (1/400 grain) of organic matter.

The main factor in securing antisepsis of the mouth is cleanliness. If the teeth are carefully cleansed and all organic matter removed, the bacteria have less on which to thrive, and mild antiseptics then fully suffice to keep the number within bounds.

LIQUOR ANTISEPTICUS.—U S—Antiseptic Solution is a new addition to the Pharmacopeia, containing 2 per cent of boric acid with aromatic antiseptic volatile oils. It is designed to be used as a mild antiseptic lotion or wash.

The official antiseptic solution is also useful as a gargle, preferably diluted with equal quantities of water. The use of hydrogen dioxid as a spray or gargle has been mentioned, also its use in connection with the official antiseptic solution.

POTASSII CHLORAS.—U S—Potassium Chlorate, while not a particularly active antiseptic, has long been favorably known to be a desirable addition to gargles and mouth washes. It is soluble in 16 parts of cold water and is generally used in saturated solution, from which traces of chloric acid may possibly be liberated. Alum and boric acid are also useful as gargles.

After the use of any of these gargles the mouth should be well rinsed with water to prevent injury to the teeth.

The antisepsis of the nasal passages is usually accomplished by thorough cleansing with warm saline solution (0.9 per cent.), nine grams (135 grains) to a liter (quart) of water, or by a mild alkaline solution made by adding nine grams (135 grains) of sodium bicarbonate to the saline solution just mentioned, after which a mildly antiseptic solution, such as the official, is used as a spray or douche, or, in lieu of this, one-tenth of 1 per cent. of phenol may be added to the saline douche, but the latter is not recommended as a routine practice.

It may be permissible here to enumerate some of the substances that have been or are used as mild antiseptic applications to the mucous membranes.

ACIDUM BORICUM.—U S—Boric Acid, generally referred to as Boracic Acid, is quite free from toxicity. It is soluble in about 16 parts of water and is but slowly absorbed.

GLYCERITUM BOROGLYCERINI.—U S—Glycerite of Boro-

glycerin, contains 30 per cent. of boric acid and has the same uses.

SODII BORAS.—U S—Sodium Borate, or Borax, has an alkaline reaction and is sometimes preferred to boric acid on this account. It is soluble in sixteen parts of water.

SODII CHLORIDUM.—U S—Sodium Chlorid, common table salt, has been in use as an antiseptic from time immemorial, and the only reason we have for presenting it here is to call attention to the fact that the Pharmacopeia recognizes it as a valuable article of the materia medica and provides certain standards and tests for purity.

SODII PHENOLSULPHONAS.—U S—Sodium Phenolsulphonate, the Sodium Sulphocarbonate of former editions of the Pharmacopeia, is another mild antiseptic that has limited but well defined uses.

Practically all the salts of the alkalis have well defined antiseptic properties, but it is obviously not necessary to recount all of them at this time.

Complete disinfection of the nose, mouth, throat, vagina and urethra is not practicable, and is not even necessary, the main thing to be sought is the cleansing of those regions from pus and organic matter on which bacteria thrive. Mucous membranes decompose the solution of hydrogen dioxid with such copious evolution of oxygen that it can not be used in the nose, and because of this rapid action by the mucous membrane itself, a large amount frequently repeated is necessary to completely disinfect such cavities.

The antisepsis of the eye is confined largely to the use of camphor, boric acid and sodium borate. In virulent affections more active antiseptics are sometimes indicated, in these cases weak solutions of mercuric chlorid, copper sulphate, zinc chlorid, silver nitrate or formaldehyd are used. These substances, however, are all extremely irritating and great caution is required. Their use by the general practitioner is not advised.

Some years ago J. Stilling recommended the use of the anilin colors, more especially pyoktannin blue and pyoktannin yellow, as weakly antiseptic applications to the eye. Pyoktannin yellow is still used to some extent either as powder, pencil or in watery solution.

Burns or scalds resulting in destruction of the skin should be treated antiseptically. Treves directs that the burn be washed with a solution of hydrogen dioxid and then with a solution of boric acid, the vesicles are then opened with an aseptic needle and the surface dusted with iodoform and dressed with aseptic cotton.

LINTIMENTUM CALCIS.—U S—Lime Liniment, or Carron Oil, so called from the name of the iron works in England where this preparation had its origin, consists of equal parts of lime water and linseed oil. It has long been in use as a popular dressing for superficial burns and constitutes a readily applied and effective non antiseptic remedy that rapidly allays the accompanying pain. If there has been extensive destruction of tissue, this remedy should be avoided, as it is not alone difficult to remove, but also forms a covering beneath which bacteria may proliferate safe from the reach of antiseptics.

POTASSII PERMANGANAS.—U S—Potassium Permanganate,

4 For use in the vagina, where a simple detergent and antiseptic action is sought, the official Liquor Cresolis Compositus in 0.5 to 1 per cent. solution will be found to be all that is required. When an astringent effect is desired the following formula for an antiseptic astringent powder will be found to answer the purpose very well.

R	Sodi boratis	℥i	60
	Alumen exsicc.	℥x	40
	Thymol,		
	Phenol		
	Eucalyptol		
	Olei gaultheriæ ℥i	gr viii	5

M. Sig. A heaping teaspoonful to be dissolved in one liter (1 quart) of hot water to be used as a douche.

5 The method of using boric acid in the eye varies greatly but usually a 2 per cent. solution of boric acid in equal parts of distilled water and camphor water will be found to be sufficient. When it is desired to use sodium borate in connection with boric acid the following will be found satisfactory.

R	Acidi borici	gr xv	1
	Sodi boratis	gr xxx	2
	Aqua dest.		
	Liquor camphoræ, ℥i	℥ss	50

2 The official antiseptic solution is slightly acid. When an alkaline antiseptic mouth wash is desired it will be well to use the Alkaline Antiseptic Solution of the National Formulary. Either one of these preparations can readily be prepared by any trained pharmacist. They are very inexpensive and should be given the preference over the various nostrums that are not alone exploited as local antiseptics, but are also advertised as cure remedies for a very large number of intestinal disorders. The working formula for the alkaline antiseptic solution is as follows:

Potassium bicarbonate	℥i	32
Sodium benzoate, ℥i	℥ii	8
Borax	grs iii	2
Thymol	m iii	2
Eucalyptol	m vi	2
Oil of peppermint, ℥i	℥iv	15
Oil of wintergreen	℥ii	60
Tincture of cudbear	℥viii	250
Alcohol	℥viii	250
Glycerin	℥viii	250
Water sufficient to make	℥xxxiv	1000

3. The pharmacopeia of the German Hospital Philadelphia contains a formula for an alkaline antiseptic tablet that has found favor with some. It contains 0.25 gm. (about 4 grains) each of sodium bicarbonate, sodium borate, sodium chlorid and sodium phenosulphate with 0.005 gm. (about 0.1 minim) of oil of clove mon. One of these tablets (the same mixture can also be directed in powder) is to be dissolved in six tablespoonfuls of recently boiled water and used as a wash for the nose.

already referred to under the head of general disinfectants, is often considered to be devoid of antiseptic properties because of the readiness with which it oxidizes all organic matter. It is true that potassium permanganate is readily decomposed by the organic matter with which it first comes in contact, and that it would be unusual indeed to find bacteria the only form of organic matter present in any one case. When we remember, however, that a very large number of bacteria represent but an infinitesimally small amount of organic matter, we will appreciate why potassium permanganate is capable of destroying vast numbers of microorganisms in those cases in which its action can be confined to them.

This substance finds its greatest usefulness as a local application in rendering foul ulcers odorless. For this purpose a fairly strong solution, 2 per cent, is freely used as a wash. Much weaker solutions are sometimes used with great benefit as urethral irrigations in gonorrhea and as vaginal douches. A hot 1 per cent solution of potassium permanganate will be found extremely useful as a deodorizer for instruments after use in the vagina while awaiting sterilization. Potassium permanganate destroys some all molds much more quickly than others, e. g., morphia more readily than strychnin. It can not enter the circulation, hence when swallowed it can act only on the substances found in the stomach. Obviously it is not suited for hypodermic injections.

Clinical Reports

SARCOMA IN A YOUNG CHILD

FRED S. SPEARMAN, M.D., C.M.

WHITING, IOWA

A number of interesting points are to be noted in connection with the following case:

1 The extreme youth of the patient, so that the malignant growths or the causes favoring their production must have been present almost, if not quite, from the time of birth.

2 The occurrence of tumors in several generations of the patient's family, showing an apparent hereditary tendency to neoplasms.

3 The marked displacement of the heart and spleen from their normal locations as the result of pressure by the tumor in the lung.

Patient—I. S., born Nov. 15, 1902, male.

Family History—Parents are both healthy, their occupation farming. A brother and sister are also in good health. Father's father and grandmother died from carcinoma. Both died years before the birth of my patient. Father's mother had an epulis removed about six years ago. Another growth came on another portion of the gums a year or so later, but disappeared of itself.

Previous History—The child was never very robust, but had had no serious illness before the present one.

Present Illness—I saw the patient for the first time on July 10, 1905. The parents stated that a little more than a year previously they had noticed an enlargement in the right side of the boy's scrotum. This had grown steadily but slowly for the first eight or nine months, but since then more rapidly. It did not seem to be painful at any time, but lately, on account of its increasing bulk, had caused some inconvenience, and the child appeared slightly nauseated at times.

Examination—This showed a tumor of an ovoid shape about half the size of one's fist in the right side of the scrotum. It was solid, smooth, not translucent, no fluctuation was present or nodules felt, and there was no tenderness on pressure. The skin over the tumor was normal, there was no redness or sign of ulceration. The left testicle could be felt in the upper part of the scrotum and was of normal size. The child was bright and intelligent. He was of rather slender build and his complexion was tanned. Evidences of rachitis were present, as shown by a rather large head, somewhat box shaped, and a

slightly developed rosary, which became more pronounced as the case progressed. I advised operation.

Operation—A trocar was introduced, but no fluid obtained. An incision about one and one half inches long was made through the superficial tissues into the growth. This was of a reddish gray color, homogeneous, was friable, of about the consistency of rather old bologna sausage, and was adherent to the tunica, which were considerably thickened. I got out the growth piecemeal, removing portions of the tunica also. A small quantity of clear fluid escaped when the upper part of the tumor was removed. Chloroform was the anesthetic used, and I noticed that the child did not breathe well toward the last, although the heart's action was fairly good throughout. Recovery was uneventful, and I let the parents do the dressing after the first week. There was a slight serous discharge for a time from the wound, but it had practically healed by July 26.

I sent the tumor to Dr. G. S. Browning of Sioux City for examination, who pronounced it a fibrosarcoma containing a large proportion of fibrous tissue.

After the operation the boy's general health improved for a time, his appetite gained and he played more with the other children.

Further History—August 10 the parents brought him to me again. They said that he had seemed listless for a few days, caring neither to eat nor play and showing some nausea at times. His skin and conjunctivae were slightly jaundiced. As the weather was very hot at the time, I attributed his condition to this and did not examine him closely, but gave him a calomel purge and a bitter stomachic mixture. August 13 he was again brought in, as he was no better. Jaundice was more marked, and the mother informed me that the nausea was increased and that he had complained at times of pain in the left side in the region of the lower ribs.

Examination—Percussion showed the area of liver dullness extended nearly an inch below the costal margin. On the left side there was an area of dullness reaching from about the lower level of the fourth rib in the anterior axillary line to an inch below the border of the ribs. This dullness extended to the spine behind and nearly to the median line in front. On palpation a firm mass could be felt below the ribs. Auscultation revealed an absence of breath sounds over the lower area of pulmonary dullness and faintness in the upper portion. There was less expansion of the left side of the chest. The apex beat of the heart was displaced nearly to the left border of the ensiform cartilage. Considerable meteorism was present. Pulse was about 140 and temperature 99. I suggested the possibility of an internal growth similar in nature to that occurring in the testicle, and judged from the physical signs present that the liver and spleen were probably involved, as well as the lung. An examination of the urine made a few days afterward was negative. In view of the autopsy findings, later examinations, which I omitted to make, would no doubt have revealed renal involvement.

The patient was put to bed on liquid diet, and under fair-sized doses of calomel the jaundice disappeared to a great extent in a short time. At first the stools were bile-stained, but afterward became slate-colored, remaining so until the end. There was considerable trouble throughout on account of meteorism, requiring constant use of purgatives and enemata. The dullness extended on both sides quite rapidly, and the child's respiration became continually more embarrassed. An aspirating needle, introduced into the left chest on August 21, brought only a small amount of bloody fluid. The following day Dr. R. E. Conniff of Sioux City saw the case with me and agreed in the probable diagnosis of an internal sarcoma. A blood count made by him showed the white cells to number 35,000 to the cmm.

At this time there was a marked bulging out of the ribs on the left side behind and laterally, although the intercostal spaces did not bulge. The dull area on both sides was nearly two inches below the costal margin and the liver was plainly palpable. The outlines, both of it and the tumor on the left side, could be seen through the abdominal walls. On deep pressure on the left side of the abdomen at the level of the umbilicus a hard body could be felt, which I thought to be a nodule in the large intestine. The apex beat was displaced to

within one inch of the right nipple and about one half inch below To and fro murmurs were present. They were harsh, prolonged, and of a somewhat ringing or humming quality, giving the impression of tenseness, like the sudden stretching of an elastic band. Pulse rate was about 160 and very weak, respirations over 40, no rise in temperature. There was slight puffiness of the eyelids, especially the right one, and the superficial veins on the right side of the neck and over the liver were distended. Priapism was present throughout the latter part of the case, being more marked after micturition. A condition of phimosis present may have had something to do with this, as well as the splenic involvement. There was no urinary suppression at any time, although the quantity was decreased. The child became continually more emaciated, his breathing more and more difficult, as toward the last air entered only the very apex of the left lung, accessory muscles of respiration were brought into play, the heart's action became faster and weaker, and on September 1 he died.

Autopsy—This was performed the next day. An incision was made from the ensiform cartilage to the umbilicus through the abdominal wall, which was very thin. The diaphragm could be seen bulging downward on the left side and was very tense on account of pressure of the growth from above. On incision the tumor was found closely adherent to the diaphragm, which formed its base. It was of a spongy, stringy consistency and nearly all of the left lung was involved. The mass was softer in the center, being almost semi fluid, and portions removed were of a grayish color, slightly tinged with pink. The spleen was not much enlarged and was shoved down to the level of the umbilicus. The liver extended down to the same level, was very friable, and of a lighter color than normal, and yellow patches and streaks were present throughout. A whitish fluid escaped from the cut or broken surfaces on squeezing. The kidneys were enlarged and engorged, being of about the same color as the spleen.

Specimens of the different organs were sent to Dr Henry Albert, state pathologist, of Iowa City, for examination. He reported that the pulmonary growth belonged to the class of endothelial sarcoma, although the arrangement of the cells was such that many pathologists would call the growth a carcinoma. The liver showed subacute inflammation. The spleen had distinct areas of inflammatory changes, with infiltration of round cells, and the kidneys manifested a distinct acute diffuse nephritis. Neither liver, spleen nor kidneys revealed any evidences of malignancy, however.

PNEUMONIA COMPLICATED BY MENINGITIS

W. H. AXTELL, M.D.

Surgeon Northern Pacific Railway
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I report the following because of its infrequent occurrence.

History—Mrs. W., aged 32, family history negative, very sparely built, has one son 5 years of age, and has had no illness since childhood. The present illness began Nov. 28, 1904. In the morning she had a sharp chill, followed in the afternoon by high temperature and a slight pain in the right lower chest. During that night and the forenoon of the next day the pain became very much augmented.

I saw her at 3 p. m. on November 29. Her temperature then was 105 1/5, pulse, 140, respiration, 36 and pointing in character, she was cyanotic. Auscultation revealed crepitant rales in the lower lobe of the right lung in the axillary line. The area of dullness on percussion was about the size of a silver dollar. The pleurisy extended over a greater part of the right lateral chest. There was slight delirium when partially asleep.

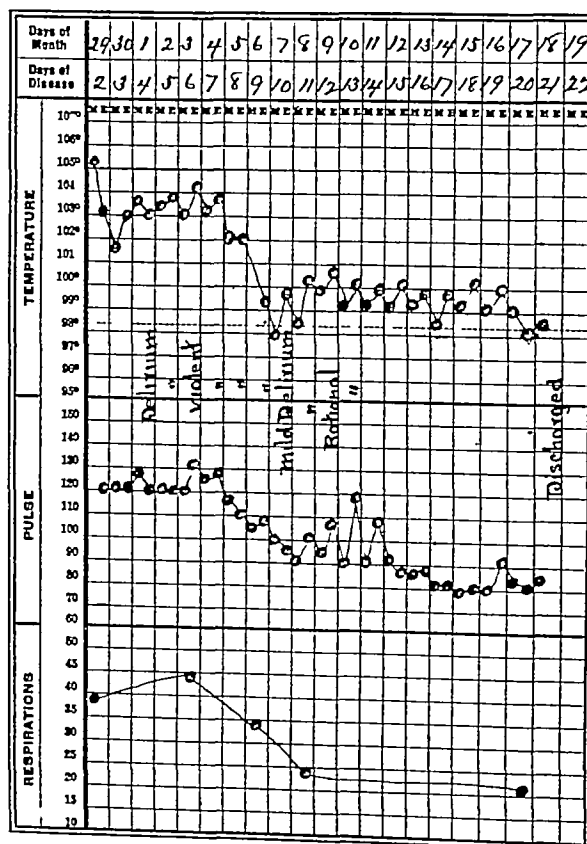
Diagnosis—Lobar pneumonia, with pleurisy.

Course of Disease—She was moved to the hospital the same evening. The course of the disease was tempestuous, but followed that of a typical pneumonia, the crisis occurring on the

eight day. On the third day slight meningeal symptoms developed. These began with a very sharp frontal headache, the pain of which was very distracting. The pupils, at first contracted, were dilated after the fourth day. There was some rigidity of the muscles at the back of the neck, but no convulsive movements. The heart showed no signs of depression or of inflammation. The delirium, at first mild, increased in severity until, on the day of the crisis, she became a raving maniac.

Osler says "Meningitis is usually associated with endocarditis and occurs in 8 per cent. of fatal cases and endocarditis in 25 per cent. of all cases."

This woman had no heart complications whatever. Two days before the crisis, when the temperature was the highest, the patient became so violent that it required the combined effort of two nurses, night and day, to restrain her. On the twenty-first day of the disease she was discharged from the hospital, thoroughly convalescent. Up to the present time her mental condition has remained normal and there has been no evidence of insanity. The treatment was simply supportive. The ice cap was applied for the relief of the head symptoms and cool spongings for the temperature.



POINTS OF INTEREST

1. Complication of meningitis without endocarditis.
2. The violent nature of the disease itself. (The meningitis in no way retarded or altered the usual course of the disease or lengthened its duration.)
3. The heart during the whole course of the disease and without special treatment showed very little depression.
4. A study of the chart shows a marked similarity in the variation and fluctuation of the delirium, temperature, pulse and respiration.
5. Of the many authorities consulted, Osler is the only one who particularly mentions meningitis as a complication of pneumonia. Tyson in his recent work simply calls attention to Osler.
6. Complete recovery.

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SATURDAY MARCH 3, 1906

THE SYNTHESIS OF PROTEIDS

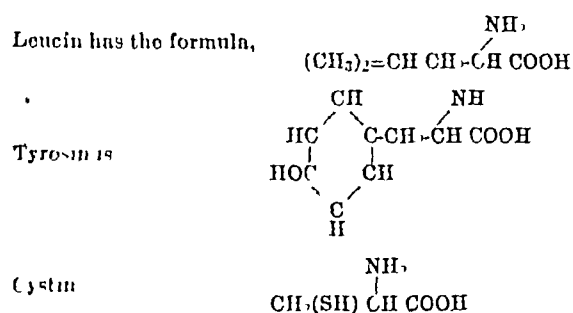
When the average medical man who has not had a recent training in chemistry sees an article on the modern progress in the study of the proteid molecule he is generally of the opinion that the contents will be beyond the range of his chemical knowledge and passes the matter by. The fundamental principle of the structure of the proteid molecule, however, is not beyond the comprehension of the man who possesses but very little knowledge of chemistry. The same is true of the principles underlying the experiments of Fischer and Curtius in the synthesis of proteids. As these studies in proteid chemistry have produced what are probably the most important advances made in the fundamental principles of physiologic chemistry and biology for many years, we feel it our duty to attempt to explain at least the essential principles of the subject to our readers.

The first insight into the composition of the proteid molecule was obtained by studying the products obtained by splitting it up by means of various agencies such as the digestive ferments, boiling acids, superheated steam.

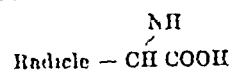
After passing through stages in which albumoses and peptones are produced, we eventually obtain a collection of simpler substances which are dissimilar to the original proteids. The longest known among these substances are leucin and tyrosin, but they are merely two of a great number of similar bodies, nearly twenty of which have already been isolated in pure condition and thoroughly identified. The important thing to bear in mind about these substances is that they are the elementary components of the proteid molecule, from which it is built up. The German writers usually refer to them as the *Bausteine* (building stones) of the proteid molecule. It has been firmly established that they exist, ready formed, in the proteid molecule, and that the process of digestion by trypsin, or by boiling acids, or by any other means, merely consists in separating these building stones from one another, so that the entire structure falls apart, and in this way we obtain the single components of which it was formed.

The next thing to take into consideration is the chemical structure of these substances, and here lies the key to the problem, for we find that each one of them is possessed of a common chemical grouping to which it

owes its most essential properties. For example, let us examine the structural formulas of a few of the *Bausteine*.

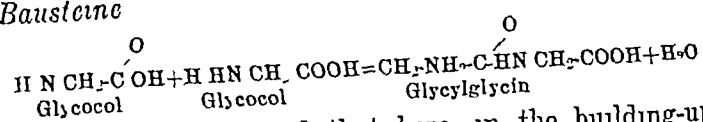


It will be observed that each building stone is an acid, which has an NH_2 group (amido group) substituted for a hydrogen atom on the carbon nearest the acid radicle (COOH), and hence they are called amino acids. It makes no difference what the rest of the radicles are, whether they are simple chains (leucin) or members of the aromatic series (tyrosin) or sulphur-containing bodies (cystin), without exception, this relation of an NH_2 group to an acid radicle is constant, as in this formula



Through this arrangement every one of the constituents of the proteid molecule is provided with a group with a strong basic character (NH_2) and a group with a strong acid character (COOH), and hence it is possible for them to unite with each other in indefinite numbers and, because of the great variety of individual substances, in practically an almost infinite number of combinations. It is believed that it is in just this way that the proteid molecule is built up.

Now because of the existence of both acid and basic characters in the *Bausteine*, it is possible to make them unite with one another again, after they have been separated during the process of splitting of the proteid molecule. (This process of splitting is called "hydrolysis," because, in the reaction, water is taken up by the substances.) By artificially uniting *Bausteine* in this way Curtius in Heidelberg, and more particularly Emil Fischer in Berlin, have attempted to rebuild a proteid molecule. The bodies so formed are called "polypeptides," and the process by which they are made may be illustrated by showing the reaction by which the simplest one of them, glycyl-glycin, is formed through the union of two molecules of glycolic acid, the simplest of the *Bausteine*.



It should be noticed that here, in the building-up process, water is split off, which corresponds to the fact that water is taken on (hydrolysis) in the breaking-down process. By means of such reactions it has, up to the present time, been possible to build up large molecules containing as many as six or seven of the *Bausteine*, and it is only a matter of time, labor and money before much larger molecules may be formed.

It must not be imagined that the structure of the complete proteid molecule is simply a long straight string of amino acids joined only in the same way as the components of glycyl-glycin. The existence of diamino acids, of benzene rings, of hydroxyl groups as in serin or tyrosin, of ring compounds as pyrrolidin carbonic acid, of substances with two acid groups as glutaminic and asparaginic acid, adds complications to the formation until it is impossible to estimate just how all the various building stones may be arranged. One must also bear in mind the size of the proteid molecule, which Hofmeister has estimated (for serum albumin) as having a molecular weight of 10,166, with an empirical formula of $C_{450}H_{720}N_{116}S_6O_{140}$, and for hemoglobin the molecular weight has been estimated at 16,669. Within such a "giant molecule" there is room for variety almost beyond computation.

The question that the practical man will probably ask at this point is "Are these polypeptids proteids, has a proteid molecule yet been formed?" The answer to that must be as follows. Polypeptids are not proteids in the sense that egg albumin or fibrin are, they are crystalline, soluble substances, and much smaller in size and molecular weight than even the peptones, which are the smallest divisions of the proteid molecule that retain most of the proteid characteristics. They are, however, probably intermediary between the peptone and the amino acids into which it splits, and they possess among others the following very important characters that are exhibited by proteids. First, they give the well-known biuret reaction, by which we usually distinguish peptones, second, and most important, they are split up by trypsin, exactly as are the proteids, liberating the *Bausteine* again. As the enzymes are such specific substances, acting only on molecules, with very specific natures and structural configuration, this is very strong evidence of the close relation of these synthetic products to the larger molecules that are ordinarily called proteids.

It should also be borne in mind that neither Emil Fischer or any other scientist expects in this way (or in any other way) to "create life in the test-tube." That is a fantasy that exists only in the minds of the ill-informed. It is hoped, indeed expected, that true, typical proteids may eventually be synthesized, but the production of a proteid is in absolutely no way comparable to the production of a living cell.

THE PARASITIC ORIGIN OF MALIGNANT NEOPLASMS

The number of observers who have discovered the cause of malignant neoplasms in the past ten or fifteen years almost equals the number who have found the parasite of syphilis. Bacteria yeasts, protozoa, all the different varieties of minute animal and vegetable life have been in turn, incriminated only to be dismissed from the bar of professional opinion with the verdict of not guilty or the more cynical one of "not proven." The

subject seemed to have been attacked from all possible sides and tested in all possible ways, but, judging from the recent work of Schmidt,¹ methods of attack are still open.

If cancers and other malignant growths are due to parasites, there surely must be some reason why we can not see these micro-organisms. Past experience with other parasites furnishes a variety of explanations. The parasite may be ultramicroscopic, it may be unstainable by methods at present known, or it may so closely resemble the cells of the host as to be indistinguishable. Schmidt thinks that he has discovered the parasite in an ameba which he has been able to observe in carcinoma in various phases of its existence. Amebas have a definite cycle of development, and among other things, at a certain stage in their development, require an intermediate host, which may be an insect or some low form of vegetable life.

The researches of Schmidt, who, reasoning from analogy, concluded that such an intermediate host must be present, led him to the discovery that a certain form of mould obtained from malignant neoplasms contained bodies corresponding in morphology to amebas in certain stages, which were not present in the same variety of mould obtained from other sources. The mould and the enclosed parasite, under favorable circumstances, could be observed to develop, and in their development went through entirely dissimilar processes.

The inoculation into animals of moulds obtained from new growths led to the formation of malignant neoplasms in a percentage of cases much too high to have been due to coincidence. In all the inoculated animals in which positive results were obtained the growths appeared at the point of inoculation and after a period of incubation which was approximately the same in all instances. In some of the experimental cases the tumors gave rise to metastases, in others they did not, in all cases they were histologically of a malignant type, either carcinomata or the so-called Jensen's tumor.

After the discovery of the parasite Schmidt reasoned that if it were really responsible for malignant neoplasms it should, if inoculated into subjects with such growths, give rise to a reaction similar to that observed after the administration of tuberculin to a patient with tuberculosis. With this idea in view, a number of individuals suffering from inoperable new growths were inoculated subcutaneously with dead cultures of the organism. In nearly all cases the result was a rise in temperature, accompanied in some instances by very marked local reaction. The amount of dead culture injected varied from one-tenth of a milligram to five milligrams, and the injections were always made at a point some distance from the new growth. In at least one instance failure to react led to a diagnosis of a non-malignant disease, the diagnosis being confirmed by operation.

¹ Münch. med. Wochsft. 1906 IIII 162.

These observations are certainly striking, and the work is along hitherto untraveled lines. Great possibilities are opened up for if patients with malignant neoplasms react to injections of Schmidt's organism, it should be possible to cure the disease by the inoculation of the attenuated virus according to the principles laid down by Wright for the treatment of certain bacterial diseases. So far as Schmidt's observations on human beings are concerned, we think it can fairly be said that as yet a sufficient number of tests have not been made. We must acknowledge the suggestiveness of the work, however, and hope that it will soon be substantiated.

HEART BLOCK AND THE STOKES-ADAMS SYNDROME.

The cause of the heart beat and the path which is taken by impulses passing from the auricles to the ventricles has been a matter of controversy for years. The physiologists have practically always been divided into two camps regarding the matter, one group insisting that the transmission of the heart impulse takes place through the nervous system, the other that it occurs by means of muscular tissue. Until within two or three years the former group seemed to have a little the best of the argument, but the discovery by His, Jr., in 1903, that there existed a muscular band which connected the auricles with the ventricles put an entirely new face on the matter. This bundle which is now quite generally spoken of as the bundle of His is in man, a narrow band 18 millimeters long, 2.5 millimeters wide, and 1.5 millimeters thick. The bundle runs posteriorly in the septum of the ventricles, from which it passes into the musculature of the right auricle and its valves.

The experimental demonstration that the bundle transmits the impulses from the auricles to the ventricles has been made by His, Humblet, and more recently by Erlanger,¹ whose interesting experiments should be read by all students of heart disease. Without going into detail regarding the methods of experimentation, it may be stated that by varying degrees of compression of the bundle of His all stages of heart block, i. e., interruption of the transmission of impulses from the auricles to the ventricles, may be obtained. Slight compression results merely in an increase in the inter-systolic pause, more marked compression produces intermittency in the ventricular contractions, and complete compression causes the auricular and ventricular contractions to occur independently of one another. The experiments also showed that, while the accelerator cardiac nerves are not influenced by heart block, the vagi lose their control over the ventricles.

The bearing which these observations have on certain forms of heart disease, and especially on the so-called Stokes-Adams syndrome, can not be overestimated. It will be remembered that the cardinal symptoms of this condition are bradycardia, in which the auricles may be

definitely shown to beat more rapidly than the ventricles, and apoplectic or epileptiform attacks. As Erlanger states, all the cardinal symptoms of Stokes-Adams disease may be explained by the effects of heart block. The relation of heart block to slow pulse and disparity of action between the auricles and ventricles has already been made clear in discussing the experimental work. The epileptiform attacks are explicable as the result of anemia of the brain and are doubtless similar to those seen after hemorrhage in warm-blooded animals. The apoplectic attacks are probably due to venous congestion of the brain, which has long been known to be associated with slow respiration, paralysis of the glottis, and spasmodic symptoms.

A glance at the autopsy protocols of the published reports of cases of Stokes-Adams disease shows at once that so far, no one pathologic condition has been found as a cause. It is also apparent that in some cases lesions are described which could easily exert pressure on the bundle of His—tumors of the septum, for example. Naturally, up to the present time there has not been any opportunity to examine this bundle in any large number of cases. We believe that a case of Stokes-Adams disease has recently been reported by Stengel, in which definite disease of the auriculo-ventricular bundle was present, and there is little doubt that similar reports will soon be forthcoming. Some points which have been developed in the treatment of this affection, on purely empirical grounds, are interestingly made clear by the experimental work, especially the disadvantages of digitalis in this affection, and the good results sometimes following the use of iodids. The latter may be partly explained on the ground that the disease of the bundle of His is sometimes syphilitic. Erlanger suggests that atropin, by steadying the pulse, will also be of value in this condition.

OUR DUTY REGARDING "PATENT MEDICINE" LEGISLATION

A large majority of "patent medicines" are injurious to the health of the public and the cause of many deaths. We believe this is the opinion of every physician, except the few who are biased by commercial relations. There is not a practicing physician who is not conversant with the deadly nature of some "patent medicines" and who, from his own individual experience, can not bear witness to cases in which harm has resulted from their use. It seems strange, therefore, that our profession is not earnestly supporting the movement for controlling the sale of these preparations.

We have emphasized the fact that it is neither wise nor necessary to oppose "patent medicines" *per se*, and few physicians do so. But there can be no argument against the need of legislation for the protection of the public against fraud in "patent medicines," and especially against those containing such poisons as cocaine, opium or its alkaloids, chloral and acetanilid. And yet

¹ The Journal of Exp. Med., 1900, vol. VIII, 8

the experience this year in several states emphasizes the fact that physicians are taking practically no interest in the legislation that is being attempted

In South Carolina they had a very fair bill before the Legislature, but it was killed simply because those who were working for it—as a rule, laymen—were unorganized. The opposition, on the other hand, was well organized by the Proprietary Association of America, and this association was especially in a position to control many of the druggists, as it also partially “controlled” the newspapers with the famous “red clause.” According to the *Journal of the South Carolina Medical Association*, a delegation of druggists visited the capitol to work against the measure, because “if it were passed it would be simply a diversion of the revenue of the traffic into the pockets of dealers in other states, and not a restriction of the sales with protection to the public as was contemplated, and that such a diversion would be not only unjust, but very injurious, to our own drug sellers.” But while the druggists were being used to oppose the measure, physicians were inactive. Referring to this fact, the above journal says “We are able to comprehend, even if we do not sympathize with, the action of the druggists, but we neither understand nor excuse the indifference of physicians to a measure which concerns one of the most important planks in our platform.”

The druggists seem to have been organized in South Carolina, as they are in other states, by the Proprietary Association, evidently through the N. A. R. D., but we do not believe that a majority of the druggists are opposed to a law regulating “patent medicines.” Most certainly many of those who are opposing such legislation do so at the instigation of the “patent medicine” manufacturers and could easily be won over if physicians would but appeal to them. “We believe,” says the *Journal of the South Carolina Medical Association*, “that their best interests will be served by working in association with physicians and not in opposition. Pharmacists and physicians should be closest friends, as they are mutually dependent and their aims and ideals should be in harmony. However commercial their recent action may indicate them to be, we believe that if we could get together the result would be a better understanding and a higher conception of the duty which they, as well as we, owe the public.”

The journal urges the physicians of South Carolina to give the matter thought and, when the occasion presents itself again, to assist in obtaining the legislation which they know is needed in the interest of public health.

In Iowa a bill is before the Legislature, modeled after the North Dakota law. It is a very conservative bill, and was introduced by Dr. Young, a member of the Senate. The profession of Iowa seems to be as unconcerned in the matter as are the physicians of South Carolina. A correspondent who has been in touch with what has been going on in the Iowa Legislature tells us that at the

meeting of the committee on February 16 to consider the bill four different representatives of the “patent medicine” manufacturers appeared before the committee, but that no physicians were present, except those who were members of the Legislature. We are informed that the proprietary men did not make a very good impression on the committee, and felt that there was not much response to their talk, which was largely an attack on the *Ladies' Home Journal* and *Collier's Weekly*. But they were not long in putting their machinery into effect in Iowa, as they did in South Carolina and in other states, with the result that druggists from all parts of the state wrote to the members of the Legislature asking them to oppose the bill, and, of course, such efforts are having their effect. The newspapers responded, too, but not as they did in Wisconsin and in Massachusetts last year. Even one medical member of the House is reported to have weakened when he received several letters from druggists in his district. Those favoring the measure expected some help from the medical profession in Iowa, but, from all reports, received practically none.

From Mississippi comes almost the same story. A bill, also modeled on the North Dakota law, was introduced by Representative Lockwood, not himself a physician. Several medical societies passed resolutions approving the bill, but the members of these societies, having passed the resolutions, evidently considered that they had done their full duty as men and physicians. A correspondent who was on the ground writes

“Physicians used no influence in favor of the bill, except to pass resolutions indorsing it, they advanced no arguments, they wrote no letters to the committee or to members of the legislature. So much for sins of omission. While the physicians of Mississippi were attending strictly to their private affairs and forgetting the interests of public health the Proprietary Association of America was busy. It sent men up from New Orleans to Jackson to lobby, it manipulated the ‘red-clause’ press (though a number of independent weeklies through the state came out squarely for the bill), it distributed literature. Antikamnia sent a special agent to the spot (Observe how this ‘ethical’ proprietary shows its true colors when quackery and fraud are threatened.) The retail druggists were stirred up to write to the Legislature, and protests poured in on the committee having the bill in charge. This committee is largely made up of physicians. Mr. Lockwood looked, with some confidence, to a favorable report. He made an error of estimate.

“Now come the sins of commission. The arguments of the proprietary interests and the complaints of the retail druggists were more potent with the physicians of the Committee on Public Health than principle, the honor of their profession or the public health which they were supposed to conserve. The bill was killed in committee and the four physicians on the committee are said to have voted to kill the bill.”

We hope that the physicians referred to voted to kill the bill because it was not satisfactory, and not because

they were opposed to the regulation of the patent medicine business. We understand that another bill is in course of preparation and will be introduced immediately. We sincerely hope that the physicians on the committee will at least vote in favor of letting it come out into the open in which case it is likely to pass, because public sentiment is in favor of the proposed legislation. It certainly will if physicians do their full duty.

The fight against fraud in "patent medicines" is on in Maryland, Mississippi, New York, New Jersey, South Carolina, Virginia, Iowa, Ohio, Kentucky and in some other states. In each of these states we believe, the state society has a committee on legislation. It is the duty of that committee to take the lead in the movement, if there is no committee then it is the duty of the president of the state association to see that the medical profession in his state is at least given an opportunity to act. If those fail to act who have been appointed or elected to represent and lead the profession in movements in which it is interested, then little successful work may be expected unless some unusually public-spirited member comes forward and takes the lead.

Our profession claims to act on altruistic motives here is an opportunity for its members to demonstrate its altruism by work. The movement against the "Great American Fraud" is being made by non-medical men, should we not support them? Is it not our duty to do this? Can we do less than help in this propaganda against the unrestricted greed of those nostrum manufacturers who are not only swindling the people, but undermining their health and who even sacrifice human life to satisfy their greed? The facts recorded on page 666 of this issue concerning one nostrum alone should be sufficient to arouse every physician to appreciate what his duty is.

THE BOSTON SESSION OF THE AMERICAN MEDICAL ASSOCIATION

The Boston session of the American Medical Association will be the largest ever held. There is no doubt of it. It will be forty-one years since the Association met in New England, and the historical attractions will, of themselves, be sufficient to draw many to the meeting. The members of the profession from New York—city and state—will go as they have never gone before. From the south, the southwest and the extreme west there are more inquiries about railroad rates, accommodations at Boston, etc., than in any other year. New England itself is also being heard from in a way to show that it will be unusually well represented at the session. The officers of nearly all the sections report filled programs unusually early and more evidence of interest in scientific work. While the passenger associations have not acted definitely, those in authority have given assurances that half rates will prevail, with the extension of time to those who want to extend their visit in New England. It is hoped that provisions will be made to accommodate those who want to go by one

route—say by the lakes—and return by another. Many foreigners have already accepted invitations to attend, among them Professor Trendelenburg, Leipzig, Germany, Mr. Reginald Harrison, London Eng., Professor von Rosthorn, Heidelberg, Germany, Professor Duhrsen, Berlin, Germany, and Professor von Frey, Wulzburg, Germany. Hence we repeat. The Boston session of the American Medical Association will be the largest ever held—and the Boston people know it and are acting accordingly. Committees have been working for months making preparations, and they promise good accommodations and a thoroughly interesting and profitable time to all who attend.

THE PHILIPPINE JOURNAL OF SCIENCE

We are glad to welcome into the journalistic field such a fine periodical as the *Philippine Journal of Science*, the first issue of which has just made its appearance. This journal takes the place of the bulletins formerly issued by the Bureau of Government Laboratories of the Philippine Islands. The periodical is to contain original articles by members of the bureau staff, as well as by others who are doing scientific work in the Philippine Islands and adjacent countries of the Orient. The journal will thus have the unique function of presenting the united scientific results achieved in contiguous countries in the tropics. With the growing interest which is being taken in tropical medicine it seems certain that a publication of this character will secure a large number of readers. The present issue contains articles on "The Water Relations of the Coconut Palm," by E. B. Copeland, "The Coconut and Its Relation to the Production of Coconut Oil," by H. S. Walker, "The Occurrence of *Schistosoma Japonicum* vel *Cattori* in the Philippine Islands," by P. G. Woolley, and "A Study of Some Tropical Ulcerations of the Skin with Reference to Their Etiology," by R. W. Strong. The last is illustrated profusely by excellent photomicrographs of histologic sections of the skin. The mechanical work of the journal is excellent. It is announced that the journal will be issued in approximately ten numbers a year.

THE PURE FOOD BILL

Rather contrary to expectations, the Heyburn Pure Food Bill passed the Senate February 21 with only four dissenting votes. The constitutional objections to the bill, raised by Senator Spooner, seem rather far fetched and we think he is only making excuses for his opposition. The standard for food and drinks is purity, or at least safety, and a plain statement on the package of what its contents consists, and these ought to be a sufficiently definite standard and certainly within the spirit of the best good for the public. The bill has now to go before the House, and it is openly charged by press correspondents that a number of votes were given to the bill with the understanding that it would not be disposed of by the House at this session. The friends of pure food must prevent the realization of this ex-

peetation If the senators were amenable to public opinion, members of the House are still more so, they must reckon with their constituents more directly, and it will be strange if the policy of delay thus suggested can be successfully carried out There is all the more need, however, that we should not slacken in our efforts to insure the passage of the bill The whiskey and "patent medicine" interests and the innumerable army of adulterators of all kinds will not be idle All the influences that have been at work heretofore will now be more active than ever to prevent the passage of the bill or to emasculate it by amendments Only half the battle has been won, and we may lose all if we allow ourselves to be lulled into a false security by this success It will not be much trouble or expense for each physician to write to his congressman, asking him to support the pure food bill, just a sentence or two will be sufficient And if half the physicians of the United States would do this, it would go a long way toward getting a national pure food bill

AN OBJECT LESSON IN PURE FOOD

A New York chemist is reported to have treated some of his friends to what he called a "synthetic dinner," each article of food being an artificial substitute for the real thing It is not stated how well these materials tasted, but it is rather significantly said that after the dinner the chemist's friends joined the ranks of the "pure fooders" As the *Chicago Tribune* aptly remarks, it was an object lesson showing "what kind of meals many of the people of the United States might expect in a few years to be sitting down to three times a day, in the absence of legislation for their protection"

Medical News

ILLINOIS

Smallpox.—Smallpox in dangerous form is epidemic in Carroll County Twenty cases are reported in Lanark and 2 in Milledgeville All lodge meetings and public gatherings have been prohibited in Lanark and the schools have been closed.—The 2 cases of varioloid reported in Lincoln have been rigidly quarantined and no new cases have appeared.

Personal.—Dr R S Frisbie assistant superintendent of the Asylum for Feeble Minded, Lincoln, has resigned.—Dr J L Allegen, Rockford, was assaulted February 14 by William Gleason, whose horse became frightened at Dr Allegen's automobile.—Dr F O Jackman, Bloomington, is suffering with septicemia.—Dr S P S Edwards, Moline, has been elected secretary of the Tri City Sanitarium

Chicago

Personal.—Dr Palmer Findley has accepted the chair of gynecology in the College of Medicine of the University of Nebraska, Omaha, and will remove to that city in the spring

Decision Against Medical Society.—Judge McEwen of the Superior Court has rendered a decision against the Chicago Medical Society in its efforts to maintain in Grant Park a boulder placed there in memory of Dr Charles Guthrie and his pioneer work on chloroform

Personal.—Dr Charles Adams has returned from a trip to Mexico.—Dr Nicholas Senn has been selected to deliver the oration on surgery at the International Medical Congress, Lisbon.—Dr Frank Billings is taking a yachting trip in the Caribbean.—Dr Willoughby Walling is visiting in New Orleans.—Dr S Jakubowski has had his name changed by decree of court to S Jackson

Public Health Condition.—For the week ended February 24 decreases are shown in death rates of all diseases excepting typhoid fever, which remains the same as for the previous week. The deaths of the week numbered 594, equivalent to an annual death rate of 15.10 per 1,000. Pneumonia caused 108 deaths, consumption, 52, nephritis, 49, violence, including suicide, 44, heart diseases, 44, nervous diseases and cancer, each 31, and acute intestinal diseases, 30

INDIANA

Smallpox.—It is reported that 20 cases of smallpox have developed in Michigan City since February 25

Damages Against Hospital.—Mrs Lillie M Grimes, Summitville was awarded \$2,500 damages against the Marion Hospital Company, January 27, for injuries sustained June 16, 1904, by falling from a second story window of the hospital.

Physician Acquitted.—Dr William H Dings, Mitchell, charged with having performed an illegal operation on Carrie Shaw, Sept. 8, 1894, from the effects of which she died, was acquitted in the Circuit Court, February 21

Do Not Wish Notoriety.—At the regular meeting of the Fort Wayne Medical Society, the medical society of Allen County, February 20, a resolution was adopted that a scrap book be kept by the secretary of the society in which is to be preserved all articles appearing in the daily papers, in which the names of members of the society are mentioned in connection with cases

Licenses Revoked.—The State Board of Medical Registration and examination has revoked the following licenses "Dr" Louisa Wessell, Fort Wayne, and "Dr" Nelson D Ross, Muncie—"Dr" George Snider, a "magnetic healer" of Richmond, has been ordered by the state board to discontinue the practice of medicine under penalty of being arrested and prosecuted for violation of the state law

Pathologic and Bacteriologic Laboratory.—Indiana University, Bloomington, announces the opening of its new laboratory of pathology and bacteriology in which courses are offered in medical bacteriology, pathologic anatomy and pathologic physiology, and which offers gratuitous service to the physicians of the state in all lines of laboratory diagnosis falling within its province, such as examination of sputum, pus, genitourinary discharges, the tests for diphtheria, meningitis, malaria, typhoid fever, examination of autopsy material, uterine scrapings, etc.

January Disease and Death.—Bronchitis and tonsillitis were the most prevalent diseases, pneumonia stood fourth and scarlet fever fifth, in Allen County an epidemic of smallpox with 52 cases was reported. In all but 27 counties of the state typhoid fever was prevalent. The deaths of the month numbered 2,998, or 411 fewer than in January, 1905. The annual death rate for cities was 16.5 per 1,000, and for the country 11.5 per 1,000. Of the decedents 405 were less than one year of age and 794 had attained or exceeded the age of 65. Consumption caused 419 deaths, pneumonia, 415, violence, 122, cancer, 113, influenza, 45, cerebrospinal meningitis, 38, typhoid fever, 35, and diphtheria, 32

Personal.—Dr Allison Maxwell, Indianapolis, has resigned as emeritus professor of the practice of medicine in the Indiana Medical College, the school of medicine of Purdue University.—Dr T Victor Keene, Indianapolis, was seriously burned while working in the State Laboratory, February 9.—Dr Thomas W Moorehead has been elected president, and Dr Myron A. Boor, secretary, of the Terre Haute Board of Health.—Dr George T MacCoy, Columbus, has been appointed a member of the State Board of Health, vice Dr Charles M Eisenbeiss, Elkhart, resigned. Dr Eisenbeiss has been appointed postmaster of Elkhart.—Dr Martin Hassenmiller, West Baden, has returned from Europe.—Dr B Frank Chambers Lyons, has been appointed surgeon for the Vincennes Division of the Vandalia Road.—Dr and Mrs Ernest S Baker, Lafayette, have left for California

KANSAS

Adds School for Nurses.—At the last meeting of the board of trustees of the University of Kansas it was decided to establish a school of training for nurses in the Kansas University Medical School Rosedale.

School at Epileptic Hospital.—A school has recently been opened for the patients at the State Hospital for Epileptics, Parsons, 25 children are at present in attendance. Manual training will be given a prominent place in the school work

Personal.—Dr Alfred F Yohe, Leavenworth has been appointed physician at the federal penitentiary, vice Dr F Meigs

Thomas, resigned—Dr J L Herhardy, Leavenworth, has been appointed county health officer of Leavenworth County, and Dr William R Van Tassel, Leavenworth, county physician—Dr L W Reed, Holton, has been appointed physician of Jackson County, vice Dr Joseph C Shaw, term expired—Dr William C Bower, Lebanon, has been appointed local surgeon for the Rock Island Railway System

Hospital Notes—Arrangements have practically been completed for the purchase of the Stewart Hospital Hutchinson, by twelve physicians of the city who will place the institution under the charge of the Dominican Sisters of Mercy. The officers of the institution are Dr Clemens Klippel, president, Dr James I Stewart vice president, Dr J F Holtz secretary, and Dr Richard A Stewart treasurer—At the annual meeting of the board of directors of the Wichita Hospital it was announced that the hospital is practically self supporting the deficit for 1905 having been only \$77.27—The directors of the Wichita Hospital Company have decided to increase the capital stock to \$50,000 in order to build a large brick addition to the present building which is overcrowded—The Sisters of Charity expect to build a hospital in Leavenworth at an expense of not less than \$50,000

LOUISIANA

One Case of Yellow Fever—On January 28 one case of yellow fever was reported from Kenner, Jefferson Parish by Dr George M Corput of the U S Public Health and Marine Hospital Service

Institution Fire—The Levee Sanitarium, Abbeville, was burned to the ground February 6 but all the patients were removed in safety. The loss is estimated at \$40,000 three fourths of which is covered by insurance. The institution will be rebuilt

Lepers' Home Purchased—After long negotiations the Indian Camp property in Iberville Parish has been purchased by the state for the lepers' home. The land comprises about 375 acres and on this four twelve room cottages will be erected each containing ten bedrooms

The New State Board of Health—The new State Board of Health reorganized January 8 with the following officers and members. President, Dr Clifford H Irion, New Orleans vice president, Dr W Glendower Owen, White Castle, secretary, W S Ingram, New Orleans and members Drs George W Gaines, Tallulah Allen J Perkins, Lake Charles T Edgar Schumpert, Shreveport, James M Batchelor, New Orleans and William G Armstrong, New Orleans. The central office of the board will continue to be at 201 Carondelet Street, New Orleans

Personal—Dr Clifford H Irion, Benton, recently appointed president of the State Board of Health has moved to New Orleans and Dr R A Gullage of Gilham has purchased Dr Irion's practice—Dr J Wofford Sanders has resigned as a member of the board of health of New Iberia, and Dr William J Tanner has been appointed his successor—Dr Charles M Menville, Houma has been appointed coroner of Terrebonne Parish, vice Dr Claiborne A Duval, deceased—At the annual meeting of the board of administrators of the Charity Hospital New Orleans, February 5, all the officers of the board and of the hospital without exception were re elected

MARYLAND

Building Fund for Hospital—The directors of the Union Hospital of Cecil County are making efforts to raise \$5,000 additional and expect to commence building during the summer at Elkton. Committees have been appointed on plans and site

Baltimore

Deaths—There were 51 deaths from pneumonia and 34 from consumption for the week ended February 24

Anniversary Exercises—At the John Hopkins thirtieth anniversary exercises, held February 22, Prof Lewellys F Barker, Dr Osler's successor, delivered an address on "The Science of Medicine and Medical Practice." A marble bust of Dr William Osler was presented to the university by Mr Daniel C Gilman, ex president, on behalf of the admirers of Dr Osler. It will be placed in McCoy Hall

Personal—Dr George C Wegefarrh has gone to Cuba—Dr John Williamson Palmer, the distinguished poet and author of "Stonewall Jackson's Way," is critically ill—Drs James S Fenton, William S Love, James D Iglehart, G Milton Lanthicum, C Frank Jones, Silas Baldwin, Frederick Caruthers, Patrick F Martin and Thomas S Sudler have been appointed coroners for Baltimore

MASSACHUSETTS

Must Report Tuberculosis—Boston physicians have been notified by special circulars that they must report all cases of tuberculosis coming under their observation. It is thought that not more than one half such cases have been reported in the past

Westfield Vital Statistics—The board of health of Westfield reports 203 deaths in 1905, a rate of 14.91 per 1,000. Of these 20 were from pneumonia, 25 from tuberculosis, and 29 from heart disease. There were in the town, during the year, 91 contagious cases: typhoid fever, 49, scarlet fever, 24, diphtheria, 12, measles, 8, and cerebrospinal meningitis, 1

Appointment Confirmed—Dr Walter R Brinckerhoff has received official notice of his appointment as director of the United States Government Leprosy Research Hospital, to be located in the leper settlement, Molokai, Hawaii. He is to work under Surgeon General Wyman and will leave Boston soon to take charge of the erection of the necessary buildings

Allow Expert Fees—District Attorney John B Moran has failed to make the Massachusetts committee on public service believe that the medical examiners in Suffolk County shall not be allowed expert fees for testimony given by them in cases arising out of and connected with autopsies or inquests performed or conducted by them in their official capacity as medical examiners

Use Much Water—In a legislative hearing in regard to enlarging the water supply of Springfield it was developed that the city now uses 150 gallons per day per capita, while other cities and towns use much less. Chelsea, 113, Quincy, 101, Malden, 60, Pittsfield, 100, Taunton, 46, Leominster, 60, Natick, 10, Haverhill, 60, Newton, 55, Brookline, 90, New Bedford, 76, and Brockton, 35

Tuberculosis Exhibit—The state tuberculosis exhibit, the outgrowth of the recent exhibition in Horticultural Hall, has been completed and is to be on exhibition for one week, beginning February 28, at the Franklin school house, Boston, and then one week at the North Bennet Street industrial school. Thence it will go successively to Lynn, Lowell, Worcester, Springfield, North Adams and Fall River. The cost of maintaining it a week is \$100 beside hall rent

MISSOURI

Hospitals Opened—St Luke's Hospital, Kansas City, was opened to receive patients February 19. It is hoped within two years to begin the erection of a hospital to cost \$250,000—The new St John's Hospital, Springfield, was opened to the public February 22

Memorial Meeting—Memorial services for the late Dr Elisha Hall Gregory were held February 18 in the Y M C A building St Louis. Dr George Homan, president of the St Louis Medical Society of Missouri, presided, and the eighteen past presidents of the society were named as honorary pallbearers. The members of the society attended the funeral services in a body

Personal—Dr John H Duncan, St Louis, has gone to Europe—Dr and Mrs C B Hewitt, Kansas City, left for Cuba, February 14—Dr J H Simons, St Louis, is confined to his house with an infected wound of the foot—Dr C R Woodson, St Joseph, has been decided not guilty of contempt of court "since he disclaims any purpose of intention of contempt"—Dr William F Meyer, St Louis, has been exonerated, as the coroner has decided that in killing his brother Dr Meyer acted in self defense

NEW YORK

Osteopaths Fined—C E Rumsey, Watkin, and O C Clock, Elmira were each fined \$50 for illegal practice of medicine

Fire in Physician's House—Fire in the residence of Dr Andrew J Dick, Watertown, caused damage of about \$600, fully covered by insurance

Insane Transferred—One hundred and twenty five patients have been transferred from the Hudson River State Hospital, Poughkeepsie, to the St Lawrence State Hospital, Ogdensburg

Examination for Medical Inspectors—A civil service examination was held in Syracuse, February 3, for the position of medical inspector of public schools. There were twenty applicants for the ten positions

Sentenced to Prison—Adam Blackburne, a barber of Fairport, charged with practicing medicine without having been legally registered, pleaded guilty and was sentenced to six months in the penitentiary

Hospital Donations—The first day of the annual donation to the Rochester City Hospital netted nearly \$11,000 for the institution—By the will of Albert G. Pitkin, New York, \$5,000 is bequeathed to the Hospital Association of the City of Schenectady—Friends of the City Hospital, Watertown, have subscribed \$3,200 toward the payment of the debt of \$13,000 on the institution

Associated Physicians Meet—The Associated Physicians of Long Island held their eighth annual meeting in Brooklyn, January 27, at which the following officers were elected: Dr. Elmer H. Bartley, Brooklyn, president, Drs. J. Ensor Hutcheson, Rockville Center, H. Beekman Delatour, Brooklyn, and Arthur H. Terry, Patchogue, vice presidents, Dr. James C. Hancock, Brooklyn, secretary, and Dr. Charles B. Bacon, Brooklyn, treasurer

Personal—Dr. Frederick H. Millener, Buffalo, has been appointed surgeon in charge of the nose, throat and ear department of the German Hospital Dispensary—Dr. Sydney F. Rogers, Cohoes, was injured by being thrown from his buggy in a collision, February 4—Dr. James C. Sharkey has been appointed health officer of Rensselaer, vice Dr. William L. Allen, retired—Dr. James E. Medden, Seneca Falls, recently fell while alighting from his buggy and sustained a Colles' fracture—Dr. George F. Mills has been appointed health commissioner of Oneida—Dr. George E. Swift has been chosen as health officer of Hudson, vice Dr. Henry W. Johnson, retired—Dr. John Archibald has assumed the duties of mayor of Cohoes—Dr. John J. English has resigned as police surgeon of Troy—Dr. La Salle Archambault, Cohoes, has returned after two years in Europe—Dr. Frederick W. Parsons, Poughkeepsie, has been appointed second assistant physician of the Hudson River State Hospital, Poughkeepsie, vice Dr. Charles H. Langdon, deceased—Dr. Clarence E. Caruth has been appointed city physician of Cohoes, vice Dr. Edward M. Bell—Dr. Martin Cavana, Oneida, has been reappointed surgeon for the New York, Ontario & Western Railroad—Dr. Edgar H. Douglass, Little Falls, has been appointed surgeon for the Little Falls and Frankfort division of the New York Central Railroad—Dr. Amos P. Dodge, Oneida, has been reappointed local surgeon of the New York Central Railroad and of the West Shore Railroad

New York City

Charter for Postgraduate School—A limited charter for three years has been granted to the Brooklyn Postgraduate Medical School by the State Board of Regents

Middleton-Goldsmith Lecture—The Middleton Goldsmith lecture of the New York Pathologic Society was given February 23 by Dr. Ludwig Hektoen, Chicago, on "Phagocytosis"

Harvey Society Lecture—The eleventh lecture in the Harvey Society course will be delivered at the New York Academy of Medicine by Prof. J. Clarence Webster, Chicago, March 3, on "Modern Views Regarding Placentation"

Sued for Alleged Neglect—Suit has been commenced against Dr. Herman J. Boldt for damages said to have been caused by the defendant allowing "a towel" to remain in the body of the plaintiff for a long period of time after the performance of a laparotomy. The plaintiff claims \$25,000 damages. Dr. Boldt says there is no justification for the suit

Arraigned and Exonerated—Dr. John A. Burke, who was arrested January 8 on the charge of complicity in an illegal operation on Mrs. Lillian Kropf, was discharged January 29 fully exonerated—Dr. Carl F. B. Fuchs, Brooklyn, charged with having performed a criminal operation on Mrs. Anna Hoffmann, Ridgewood, was discharged from custody January 29

Contagious Diseases—There were reported to the sanitary bureau for the week ended February 17, 1,674 cases of measles with 37 deaths, 371 cases of diphtheria, with 62 deaths, 328 cases of tuberculosis, with 176 deaths, 198 cases of scarlet fever with 11 deaths, 100 cases of varicella, with 1 death, 30 cases of cerebrospinal meningitis, with 21 deaths, 30 cases of typhoid fever with 10 deaths and 1 case of smallpox, a total of 2,732 cases with 318 deaths

Tuberculosis Exhibit Opened—Between 2,000 and 3,000 persons visited the traveling tuberculosis exhibit of the committee on the prevention of tuberculosis of the Charity Organization Society which was opened to the public in the Educational Alliance building on February 20. It will remain open until March 10. Dr. Alfred Meyer delivered a lecture. Stereopticon views were shown illustrating how the roofs of tenement houses could be used as sanatoria

Brooklyn Wants a Health Commissioner—The Kings County Medical Society has announced itself as in favor of having a health commissioner instead of an assistant sanitary superintendent. The society contends that the health department can not be administered with satisfaction either to the medical profession or the public because of lack of authority and direct responsibility. An appeal has been made to President Coler requesting him to have a bill proposed providing for the appointment of a health commissioner for this borough

Interne Anesthetists Organized—The interne anesthetists of the various Brooklyn hospitals have organized a conference to meet at the various hospitals from time to time and listen to papers, reports of cases, etc. The first meeting was held at Long Island College Hospital, December 19, on invitation of Dr. Adolph F. Erdman. After an informal social half-hour Dr. James T. Gwathmey, Manhattan, demonstrated the use of his new vapor inhaler. The January meeting was held at the Bushwick Hospital on invitation of the consulting anesthetist, Dr. Woolsey

Gifts to Hospitals—Isaac Guggenheim has given \$250,000 to the Sydenham Hospital for the erection of a new building, conditioned on the raising of a sufficient endowment by the hospital directors for the maintenance of the institution—By the will of the late Margaret H. Jones, St. Luke's Hospital, Presbyterian Hospital and the Postgraduate Hospital will each receive at least \$125,000—Nearly \$20,000 has been paid into the treasury of the Beth Israel Hospital as a nucleus of the fund for the annual Purim ball, to be held March 14 for the benefit of the poor of the East Side

Bronx Medical Society—This society was organized two months ago by about forty physicians of Bronx borough. Dr. Alfred F. Brugman was made president of the society. One of the first subjects for discussion was an amendment to the vaccination bill, now before the legislature, releasing from compulsory vaccination the children of parents who have scruples against vaccination. The society adopted a resolution protesting against the passage of any measure which would allow unvaccinated children in the public school and directed that the members of the legislature from the Bronx borough should be informed of this action

Pasteurized Milk for City's Wards—All milk and cream bought by the charities department is now pasteurized. The department purchases daily about 3,000 quarts of milk for the 6,000 inmates in the city's charitable institutions, and all the milk is pasteurized before its delivery by the contractor. The contract requires that all the milk shall be raised to a temperature of not less than 155 degrees nor more than 167 degrees F and shall immediately be cooled to a temperature of 45 degrees F or less. The process is so simple that there is scarcely an appreciable difference in the cost of the milk. The beneficial effects have been chiefly noted in the improved keeping qualities of the institutional supply

NORTH CAROLINA

Personal—Dr. Charles L. Minor, Asheville, was painfully injured in an automobile accident recently

Hospital Notes—Pittman Hospital, Tarboro, is being enlarged—The physicians of Raleigh are actively working for the establishment of a new general hospital in that city—Mission Hospital, Asheville, has added a new wing, which was formally opened last month

Sanatorium Company Chartered—The Crowell Sanatorium Company opened at Charlotte, January 1. The new company has absorbed the Crowell Sanatorium, Charlotte. The officers of the new company are: Dr. S. M. Crowell, president, Dr. I. W. Faison, vice president, Dr. W. M. Strong, secretary, treasurer, and resident physician

Preparation for State Meeting—The Mecklenburg County Society has taken action regarding arrangements for the annual meeting of the Medical Society of the State of North Carolina, in Charlotte, May 29 to 31. Dr. Robert L. Gibbon was chosen chairman of the committee of arrangements, and Drs. R. J. Brevard, John R. Irwin, W. O. Nesbet and E. P. Russell make up the remainder of the committee. The president of the society, Dr. E. C. Register, was also made a member

PENNSYLVANIA

Bequest to College—By the will of the late John Porterfield Allegheny \$50,000 is ordered to be paid to the Medical Department of the Western Pennsylvania University, Pittsburg, on the death of the testator's sister

Entertained Takaki—The Allegheny County Medical Society entertained Baron Kanehiro Takaki, surgeon general of the

Japanese imperial navy, February 11. A dinner was given at the Hotel Schenley after which an address was delivered by Baron Takaki, followed by a smoker reception at the German Club.

Railway Surgeons Meet—The annual meeting of the Pittsburgh & Lake Erie Railway Surgeons' Association was held at Pittsburgh February 15. Dr. John D. Milligan, Pittsburgh, was elected president. Dr. Edward M. Hand, Coraopolis, was re-elected secretary, and Drs. Loyal W. Wilson, New Castle, and George W. Gallagher, New Haven, were elected vice presidents.

Hospital Notes—St. John's General Hospital, Allegheny, is to be enlarged so that it will accommodate at least 60 more patients at a cost of more than \$25,000. Forty physicians of Harrisburg have formulated plans for the institution of a private hospital in Harrisburg. Dr. C. A. Rahter was elected chairman and Dr. C. M. Richter, secretary, of the organization.

Damages for Physician's Death—The United States Admiralty Court handed down a verdict of \$25,000 in favor of the widow and children of Dr. J. M. B. Ward of Marcus Hook against the Steamship Company of Copenhagen. Dr. Ward was killed by falling down the hold of the steamer *Eurymia* Jan. 21, 1905 while in the discharge of his duties as quarantine physician.

Monongahela Valley Medical Society—At a meeting held in Monaca January 27 this society was organized. The membership includes physicians from Washington, Fayette and Westmoreland counties. The following officers were elected: Dr. John W. Gordon, Bellevernon, president; Dr. Harry I. Reppman, Charleroi, vice president; Dr. Joseph W. Hunter, Monaca, secretary; Dr. J. C. Inos, Charleroi, corresponding secretary; Dr. Howard R. Day, Monaca, treasurer; and Drs. George F. Nickels, Bellevernon; McKay, Charleroi; and Arthur R. Wilson, Monaca, censors.

Personal—Dr. George B. Kunkel has been appointed surgeon of the Philadelphia & Reading Railway in Harrisburg. Dr. H. F. Zerner has resigned as alderman of New Castle. Dr. Isadore J. Weida, Emmaus, has been elected president of the board of health, vice Dr. Martin B. Backenstoe, resigned. Dr. Ralph W. Montelius, Mount Carmel, has been appointed surgeon for the Philadelphia & Reading Railway between Port Clinton and Williamsport. Dr. J. Marion Vastine, Catawissa, has been appointed division surgeon for the Philadelphia & Reading Railroad. Dr. Theodore B. Lashells, Merdville, fell January 21, fracturing his right hip. Dr. Charles W. Everhart, Roversford, who has been a patient at the Phoenixville Hospital, became violently insane, January 10, and was removed to the State Hospital for the Insane, Norristown. Dr. Charles D. Schaefer, Allentown, has been unanimously elected acting mayor of that city. Dr. Jacob Stichel, Williamsport, was recently operated on for a tumor of the left breast. Dr. Laurin C. Thomas, Latrobe, has been appointed local surgeon for the Pennsylvania Railroad.

Philadelphia

Gift to Hospital—At the annual meeting of the Methodist Episcopal Hospital February 9, it was announced that \$2,000 had been subscribed for a new ward.

Diphtheria Closes School—On account of the discovery of two cases of diphtheria in the Meredith school, February 23, the school was ordered closed and fumigated.

Illegal Practitioner Sentenced—A woman who advertised as "Dr. Roberts, female specialist" was tried in the Criminal Court, January 30, charged with abortion, was found guilty and sentenced to three years in the Eastern penitentiary.

Medical Inspection—The reports, made February 23, of medical inspections during January show that in 315 public schools 6,454 visits were made. Treatment was recommended in 4,483 cases, and 1,561 children were excluded from attendance. Of these 691 were boys and 870 girls. The number of pupils readmitted was 802. Vaccinations were made in 277 instances.

Alumni at Banquet—The dinner given by the alumni of the University of Pennsylvania Medical School, February 21, was attended by more than 260 persons. The toastmaster was Dr. George E. de Schweinitz. Among the speakers were Provost Harrison on "The University of Pennsylvania", Dr. George A. Pierson, "The Medical Faculty of the University", Dr. W. W. Keen, "Sister Medical Schools", Dr. George Guthrie, "Pennsylvania Alumni", Dr. John A. Witherspoon, "The Alumni from Afar", Dr. Daniel M. Hoyt, "The Junior Alumni," and Dr. Sylvester J. Deehan.

Surgeon-General Takaki in Philadelphia—Surgeon General Kanekiro Takaki of the Japanese army and navy spent the

week of February 10 to 24 in this city. He received the degree of bachelor of science at the "University Day" exercises, February 22. February 23 he addressed the students of the university on "Sanitation in the Army and Navy", and on February 24 he addressed the students of Jefferson Medical College in the amphitheater of the college on "The Medical College Conduct of the Russo Japanese War", and stated that the Japanese had received their surgery from the teaching of Dr. Gross.

Prevalence of Measles—The epidemic of measles shows no sign of abatement, according to reports of the bureau of health. Since January 1 there have been 4,021 cases reported, but large as the number is, it does not include all sufferers, for in many instances medical advice is not sought, and in such cases returns are not made to the health authorities. In the six days which ended at noon February 23, there were 649 cases reported, and it is believed that the number for the week will exceed that of any week since the disease became prevalent. In the first week of the present year 353 cases of measles were reported, and the disease has steadily progressed ever since.

Much Typhoid—The prevalence of typhoid fever has reached the highest mark in about three years. Dr. A. C. Abbott emphasizes the importance of filtration and has compiled the following figures. In the Queen Lane district with unfiltered water there have been during the week 63 cases of typhoid among a population of 293,120 people, or 21 cases to every 10,000 inhabitants. In the Wentz farm reservoir district, which is supplied with unfiltered Delaware water, there have been 87 cases among 176,712 people, or 49 cases for every 100,000 people. In the filtered water district of West Philadelphia with 42,000 population, there was not one case of typhoid fever. There have been but three cases since January 1. In the Twenty-first and Twenty-second wards, which are supplied with filtered water, and which include 113,000 people, there were but seven cases. The records of the health bureau show that there are 2,300 cases of typhoid under treatment in the city.

Personal—Drs. Charles Browne and E. J. Porteous left February 23 for an extended tour of the Pacific Coast. Dr. Rebecca Leisher, who has been ill for many weeks, has returned to her home in Philadelphia. Dr. and Mrs. L. Webster Fox have returned after a month spent in Port Antonio, Jamaica. Dr. Richard H. Harte, surgeon to the Pennsylvania Hospital, has been elected a member of the city council. Dr. E. G. Whinna, who has been in failing health, has left the city to recuperate. Dr. Arthur R. Cobb, while in a state of despondency, jumped from the second story window of a cottage in Cape May, and sustained general contusions and fractures of both arms. He is convalescing in the Eahnemann Hospital. Dr. Joseph P. Tunis entertained the Biological Club at dinner at his residence, February 23. Dr. Robert Abbe, New York City, will address the W. W. Keen Surgical Society of Jefferson Medical College in the amphitheater, March 17 at 8 o'clock, and will be given a reception at the Bellevue Stratford after the address.

GENERAL

Cholera in Manila—Dr. Heiser, chief quarantine officer, reports that the cholera situation in Manila remains about the same. A few sporadic cases have occurred in the city, but in almost every instance the infection could be traced to the outside. He states that cholera has practically described an entire circle of a radius of 25 miles around the city of Manila. In view of the very few cases of cholera in Manila and their sporadic character, it was deemed advisable still further to modify the outgoing interisland quarantine which was placed on vessels.

Health Report of the Isthmus for January—Colonel Gorgas reports that the health of the Isthmus continues excellent. In January there were 22,000 employes on the rolls and the daily sick list was about 503, this gives an average sick rate of 22 per mille. Such loss from sickness, Colonel Gorgas states, compares very favorably with that of any body of men working anywhere. The daily sick rate is an accurate measure of the loss to the commission from illness. It does not necessarily mean a low death rate. During January the number of deaths from pneumonia was large. Among the employes there were 74 deaths and of those 26 were from pneumonia. Most of these were among negroes. Only one American died from this disease. The report states that surprise has been expressed that there should still be breeding places of mosquitoes on the Isthmus, but calls attention to the fact that when the Americans left Havana after a most successful yellow fever campaign

paign, the last inspection showed something like 300 breeding places in that city. Mosquito work on the Isthmus has reduced the number of such places to the minimum. There have been no new cases of yellow fever since the last report.

FOREIGN

Little Plague in Japan.—Acting Assistant Surgeon Fowler of the United States Public Health and Marine Hospital Service reports that after a cessation of thirteen days a case of plague occurred in Kobe.

Frontier Practice.—A number of physicians residing on either side of the boundary between France and Belgium met recently at Paris to draw up a satisfactory code of ethics for their guidance in frontier practice.

Prizes for Milk Supply and Housing of the Lower Classes.—An international exposition of hygiene is to open at Milan in May and to continue through the summer. To celebrate the occasion the king of Italy has offered a prize of \$1,000 for the best well tested arrangement for supplying cities with pure milk. A second prize of \$2,000 is also offered for the best type of dwelling house for the masses adapted to the climate of southern Italy.

Proposed Changes in Examinations at University of Edinburgh.—Changes in the medical course at the University of Edinburgh are proposed, to enable students to appear for examination in the earlier subjects of the curriculum at an earlier period than has been the case. This is to give more time for the final subjects. The *Lancet* states that it would still further help if the university court had applied for powers to prevent, when it was thought desirable, students attending classes of an advanced division when they had failed in the subjects of an earlier division. Meanwhile the university has no such power, the result being that the work of classes is sometimes hindered by a number of students attending who are not in a position to benefit by the class and who act as a drag on the others.

Von Noorden in Vienna.—As already mentioned, Carl H. von Noorden at present in Frankfurt, has accepted the summons to the chair of internal medicine left vacant by the death of Nothnagel at Vienna. The Vienna authorities agreed to all his terms promising the completion of the new model clinic in two years and the erection of a new laboratory for him, with extensive remodeling of the present clinic at once. He is to bring his assistant with him, and the latter is to have a professorship of medical chemistry created for him. Von Noorden has never been a clinical teacher, and it will be a great change for the specialist in the pathology of the metabolism to attempt to fill the chair of Nothnagel and Shoda, distinguished for their universality and skill as teachers. A Vienna correspondent of the *Deutsche med. Wochs* refers casually to the danger of von Noorden's making the clinic one for metabolic affections exclusively, but the editors comment that von Noorden's record should banish this fear. He made many friends in this country during his recent visit here to lecture. One of his addresses then on some of the problems of metabolism was published in *THE JOURNAL* at the time Oct. 28, 1905 as our readers will remember. He is comparatively a young man, not quite 45.

Announcements by von Behring in regard to "Immune Milk Supply" in Prevention of Tuberculosis.—On February 8 Professor von Behring lectured at Berlin on this topic before the German Agricultural Council. He announced that he had lately perfected an inexpensive method for producing and keeping the immunizing properties of the tubercle bacilli for injection while at the same time destroying the vitality of the tubercle bacilli. He calls the fluid thus obtained "tuberculase" and expressed hopes that it was destined to prove an effectual aid in the stamping out of tuberculosis among men and animals. He added that he had not been experimenting with tuberculous cattle in a condition even remotely approximating that of a consumptive human being "and consequently," he continued "I have no scientific basis for the assumption that tuberculase may prove an effectual remedy for human pulmonary tuberculosis. I did not speak at Paris of a remedy for consumption in the sense of a cure for already established tuberculous destruction of lung tissue. I spoke only of a remedy to prevent consumption in young persons by acting on an already existing tuberculous focus in such a way that its self-healing may proceed with the natural healing powers of the organism undisturbed by renewed tuberculous infection." He aims to render children immune to tuberculosis by feeding them on milk from cows immunized with tuberculase. The children will then grow up refractory to tuberculous infection.

Pharmacology

Indorsements of Campaign Against Nostrums

Dr. C. W. Dulles, Philadelphia, writes

"As one who has followed the career of *THE JOURNAL* since its birth, I wish to express the gratification with which I have seen it attain a degree of scientific excellence that makes it the equal (*me jndice*) of any medical periodical in the world. At the same time, I may express the pleasure it gives me to find it fully enlisted in the cause of intelligence and decency in the application of medicinal agents to the treatment of disease and warning against the credulity of the medical profession and the unscrupulousness of the manufacturers of many proprietary medicines. Having for years, in private and in public, borne testimony against these two disgraces of our time, it is most encouraging to see so strong a champion of the good cause enter the lists. May your efforts be as successful as your object is laudable."

Dr. Victor H. Dye, Sistersville, W. Va., writes

"At this time I take pleasure in heartily indorsing everything that *THE JOURNAL* has done and is doing in the crusade against 'patent' and proprietary medicine vendors. It is exactly portraying my sentiments regarding that curse of the American people."

Dr. W. C. Herman, Cincinnati, writes

"I take great pleasure in sending you my congratulations for the great work *THE JOURNAL* is doing for the physician and for the laity as well in its exposure of the nostrum evil. This work comes a little bit late, it is true, but 'everything comes to him who waits' good and bad."

Dr. Theodore Zbunden, Toledo, Ohio, writes

"I wish to express my approval of all the undertakings of the American Medical Association, and wish to say that I am especially pleased with the work of the Council on Pharmacy and Chemistry. I am looking into the matter of patent-medicine advertisements published in some religious journals and hope to accomplish something in that way. Be assured of my hearty co-operation with the officials of the American Medical Association in all their good work."

At the regular meeting of the Muscogee County (Ga.) Medical Association February 7, the society unanimously indorsed the resolutions adopted by the Suffolk District Section of the Massachusetts Medical Society, approving the action of the American Medical Association in establishing the Council on Pharmacy and Chemistry, and commending the educational campaign now being conducted by *Collier's Weekly* and the *Ladies' Home Journal* in exposing the business methods of the Proprietary Association of America.

Similar resolutions were adopted by the Androscoggin County (Maine) Medical Association, the Logan County (Ohio) Medical Society, the Delaware County (Ohio) Medical Society, the Utica (N. Y.) Medical Library Association, the Champaign County (Ill.) Medical Society, the Fayette County (Ky.) Medical Society, the Lenawee County (Mich.) Medical Society, the Chattanooga and Hamilton County (Tenn.) Medical Society and the Calhoun County (Ala.) Medical Society. Each member of the last named society was also requested to write a personal letter of commendation to the editors of *THE JOURNAL* of the American Medical Association, the *Ladies' Home Journal* and *Collier's Weekly*.

A Physician's Experience with Acetanilid.

The physicians of Racine, Wis. recently gave a banquet for the members of a medical society in an adjoining town. The afternoon preceding the banquet one of the visiting physicians took several powders of acetanilid and caffeine, and immediately before the banquet—about 9 p. m.—he took one or two more. In all he took about 18 grains of acetanilid. As the banquet progressed he gradually became cyanotic, but seemed normal otherwise until collapse occurred. The heart action was very weak, and there were nausea, vomiting, diarrhea, and intense cyanosis. He was at once put to bed in the hotel in which the banquet was held, and several physicians worked over him all night. Powerful stimulants were applied, but he was not con-

sidered out of danger till the next morning, and even then there was still some cyanosis. He was not able to go home till after thirty six hours had elapsed.

Poisoning from Electric Headache Powders Recovery

Dr. A. P. Merrill, Pittsfield, Mass. reports January 23, that he was called to see a woman about 27 years old. She was suffering with considerable pain in the stomach and said she "felt cold and numb all over" and was listless and could hardly be roused to answer questions. She had had a bad

irregular, and for over an hour the radial pulse could not be felt. He decided that she was suffering from acetanilid poisoning and treated her accordingly, giving stimulants and applying external heat. The woman was ill for a number of days, and for forty eight hours she could hardly keep awake. During that time the extremities were cold and more or less numb. Her digestion was much upset, and Dr. Merrill states that she reached normal only after three weeks or more. The powders taken by this patient were labeled "Electric Headache Powders" and were bought at a local drug store.

THE SLAUGHTER OF THE INNOCENTS

Kopp's Baby's Friend

In the JOURNAL Nov. 27, 1905, page 1678, there appeared a letter from an Omaha physician reporting the death of a child following the administration of four drops of Kopp's Baby's Friend.

In the same issue we published the report of an analysis of this preparation. According to this analysis, Kopp's Baby's Friend contains in 100 cc. 0.0710 gm. morphin sulphate, approximately one third of a grain in one fluid ounce.

On January 6, 1906, page 51 we noted a report of the death in Baltimore of a child aged three and one half months following the administration of this preparation. As will be remembered in reporting this case we quoted from a published statement of the state's attorney in which he emphasized the "urgent need of a law prohibiting the sale of any patent or proprietary medicine containing any deadly drug unless the same is labeled 'Poison'."

On Feb. 10, 1906, page 417, we printed a letter from the physician who reported the first-mentioned case, notifying us of a case of poisoning from the use of this "remedy."

We have now to record two other deaths which, it is alleged, have followed the administration of Kopp's Baby's Friend. In Utica, N. Y., twin children, a boy and a girl aged five weeks, were given the preparation in

the evening, the boy is said to have been given four drops and the girl two. In the morning each were given another dose. Both children died that day, the boy at 2:30, the girl at 7:45 p. m.

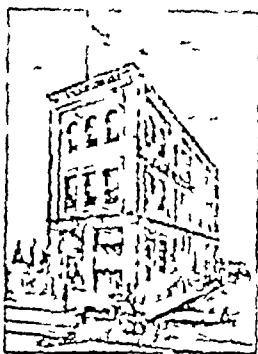
"The said Adam and Eve Gnad, otherwise known as Zarlah, died on the 25th day of January, 1906, the boy died at 2:30 p. m. and the girl died at 7:45 p. m. at No. 25 Kossuth

Avenue, in the City of Utica, County of Oneida, N. Y., of morphin poisoning. The evidence shows that Stanislaus Gnad, the father of the infants, had administered to them a dose of a mixture, which is known as 'Kopp's Baby's Friend,' on the night of January 21, 1906, and that the infants (whose age was one month and one day) died on the following day. Now after investigating the circumstances attending such deaths and obtaining the report of Drs. James G. Hunt and H. F. Preston, who made an autopsy on the bodies of the deceased infants and also the report of Drs. Nelson and Smith, chemists, who made an examination of the

stomachs and stomachs' contents of the dead infants, and also an examination of a portion of the mixture above mentioned, showing that it contained morphin, I find and decide that the said Adam and Eve Gnad otherwise called Zarlah, died from an overdose of 'Kopp's Baby's Friend' which was administered by their father, but without criminal intent."

Thus without any particular effort on our part there has come to our attention within three months evidence of four deaths and one case of poisoning from this "soothing" medicine for infants. The question is, how many cases have occurred to which our attention has not been called, or which have not been reported? Is it possible that we have accidentally heard of all of all such cases? Is it not more likely that there are hundreds that are never even reported to

the coroner? Of course, it would be wrong to check this kind of business by legislation, vested interests are at stake, especially vested interests of newspapers. Kopp's Baby's Friend is only a sample, it is no worse than hundreds of others that are allowed to be sold for the aggrandizement of the few, but to the injury and death of the many.



City, Chicago,

Box 110, N. Y.

Dear Sir:

Would you be so good as to furnish me with a monthly report of the births occurring in your city? What I desire is the fathers' names and addresses. In case of illegitimacies, the mothers' I have made arrangements with the City Clerk in many cities for the furnishing of this report and would like very much to have that of your city.

Kindly let me hear from you and oblige

Yours very truly,

MRS. J. A. KOPP

[It is purely a coincidence that we are able to reproduce the above letter at such an appropriate time. It was sent by Dr. Cochrane, secretary of the Board of Health of Knoxville, and was received by us February 24 in the same mail that brought a certified copy of the coroner's verdict on the 11th poisoning cases.]

Poisoning from Mrs. Winslow's Soothing Syrup

Dr. G. M. Cummins, Hamilton, Ohio, reports a case of poisoning from Mrs. Winslow's Soothing Syrup, which occurred in his practice.

Oct. 24, 1905, he was called to see a male twin child, aged 3½ months, suffering from cholera infantum. He ordered a restricted diet and prescribed as follows:

R.	Bismuthi subnitralis	gr. xii	75
	Pepsini (pure)	gr. xl	260
	Aque q. s. ad	5iss	45
Sig.	Shake and give 1 teaspoonful every hour		

headache for three days and on that evening had taken a headache powder, and as she felt worse after it she took another in twenty minutes, as the directions were to repeat if necessary. In about fifteen minutes after taking the second powder she felt numb, cold, very tired and sleepy, and had difficulty in speaking. There was absolutely no feeling in the extremities for over two hours. Dr. Merrill says that when he saw her, about thirty five minutes after she had taken the second powder, she had considerable pain in the stomach, the pupils were unevenly dilated, the heart action was very weak and

At 12 o'clock that night he was called and told the baby could not be aroused, that it had been sleeping for an hour or more and had almost stopped breathing. A neighbor had suggested giving the child a dose of Mrs Winslow's Soothing Syrup and it had been given two doses of one half teaspoonful each, one half hour apart. On examination Dr Cummins found the pupils contracted to the size of a pinhead, pulse very slow and respirations four a minute. He diagnosed opium poisoning. Dr Cook was called in consultation, and after four hours' work they succeeded in bringing the patient around all right. Dr Cummins states that he has no doubt that this was a case of opium poisoning from the morphin contained in the soothing syrup.

Chamberlain's Colic Remedy Satisfactory to a Morphin Habitue.

A correspondent sends us a newspaper containing the following item:

Judge Smith sentenced Miss Ella Clark of the city (Mason City) to Mt. Pleasant asylum to-day (Jan. 29 1906). She was proven to be addicted to the use of morphin to the extent that her health has been undermined and she is now almost a physical wreck and is confined to her bed. In her desire for the drug she brought large quantities of Chamberlain's colic remedy which it is said she has been using for years.

Problin.

NEW YORK, Feb 21, 1906

To the Editor —The article on "The Pharmacopeia and the Physician" in THE JOURNAL, February 10, contains, under the caption, "Laxative Sweet Substances," a reference to and a footnote on problin. We beg leave to state that problin is not a "laxative sweet substance", the phenolphthalein it contains is merely an adjuvant.

The note makes no mention of the fact that problin is primarily a biliary disinfectant, the salicylic acid it contains being excreted by the epithelia of the biliary passages. Among many others Dr Kuhn (*Zeitschr f kl Med*, vol lxxi) reports in detail extensive experiments which show that salicylic acid is the best biliary disinfectant.

The assertion that salicylic acid and acid sodium oleate are the most powerful cholagogues is perfectly "in accord with the generally accepted opinion of therapeutists." Thus Professor Stiller (*Wien med Woch*, 1, 1905) writes that according to Mandelstamm's researches salicylic acid is the most powerful cholagogue. While the bile salts produce a thick bile, salicylic acid causes an abundant, thin secretion, which is deficient in solid constituents and is well adapted to disintegrate and mobilize biliary calculi. Professor Rosenheim (*Deut Med Woch* Oct 2, 1905) reports similarly. Sir James Barr (*British Medical Journal*, Jan 20, 1906, p 126) refers to the cholagogue action of the salicylates. Professor Ewald (see translation in *Brooklyn Med Jour*, Oct., 1905) says that after acute attacks of inflammation or colic, cholagogue remedies are indicated, and he prefers bile salts, acid sodium oleate, sodium salicylate etc.

Problin is 'difficult to prepare' because acid sodium oleate is an oily substance disagreeable to handle, and it would give the pharmacist much trouble to incorporate it properly into a pill with the other ingredients. Certainly the constitution of the pills would vary if the pharmacists were to prepare them, and they would be more expensive. Besides, acid sodium oleate is not kept in stock by druggists, being a special preparation of sodium oleate used by the manufacturers.

We are, of course, in heartiest sympathy with THE JOURNAL'S work for ethical and scientific therapeutics, and hence regret all the more the derogatory remarks made on problin, which are doubtless due to an insufficient acquaintance with the remedy.

SCHERING & GLATZ

[The contention that one of its ingredients is rarely found in stock and that it is disagreeable to handle is in part true, but we repeat that problin can be prepared by any competent American pharmacist. We admit, however, that an article like problin is more likely to be satisfactory if prepared by a reliable and well-equipped manufacturing pharmaceutical house such as Schering & Glatz represent than by the average pharmacist.—Fp.]

Correspondence

Interstate Reciprocity

CHICAGO, Feb 24, 1906

To the Editor —In reply to the criticisms of my article on "Interstate Reciprocity," by Dr B D Harrison, secretary of the Michigan State Board of Registration in Medicine, I beg leave to submit the following:

I desire at the outset to state that my article incorporated an educational plan which I proposed as a feasible working scheme and for which neither the Illinois State Board of Health nor the Council on Medical Education of the American Medical Association, with which I have the honor to be connected, are to be held responsible, as the article represents simply my own personal views. I desire to thank Dr Harrison for calling attention to the words "medical boards" in the sixth paragraph and for the substitution of the word "societies" therefor.

I regret very much that Dr Harrison seems to have utterly failed to grasp the fundamental ideas which I tried to convey, namely, that the American Medical Association is desirous of assisting the examining boards, and that the plan proposed is not simply a scheme of reciprocity, but a proposed plan of education which, if successfully carried out, will serve as a rational foundation on which reciprocity will naturally rest.

I attempted to anticipate and prevent any criticism of this kind by stating explicitly, at the outset, that "everything relating to the whole subject of medical education belongs to the state." And, again, "The examining and licensing board in each state is the only body authorized to determine the conditions or terms under which physicians are licensed in the state." In order to emphasize still further the fact that the authority of the state is supreme, after outlining the plan of a standard curriculum, in the preparation of which I distinctly state that the leading educators "and members of the examining boards are to unite," I again say, "To establish reciprocity it is only necessary for the states to adopt the standards of the Council on Medical Education." Under the circumstances I see no occasion for the use of such expressions as "usurpation of the authority of the state." Does this look like usurpation of power or authority? Does this imply any intention on the part of the council to assume any of the prerogatives of any of the boards? Does this carry the implication that the medical boards are not "capable of fulfilling the duties and responsibilities with which they are charged by the state"? Does this bear out his accusation that the committee "is entering the field entirely without the range of the committee's power and status"?

Dr Harrison accuses me of "having omitted in his statement of facts a large percentage of the most material facts connected with and necessary to the success of interstate reciprocity," and yet he adds only two more, namely, the statement that no one school of practice has the authority to settle the question of reciprocity, and that all proper and effective medical laws have been enacted by the co-operation of the several legalized schools of practice. These two statements are true, but wholly irrelevant as far as the present discussion is concerned. We are, therefore, driven to the conclusion either that Dr Harrison thinks these two points the "most material" in solving the problem, or else that he knows what the most material facts are but fails to state them. Dr Harrison again says "It is impossible for Dr Webster, or, for that matter, any one else, or any association of persons except a state legislature, to confer on the Council of Medical Education of the American Medical Association, of which he is secretary, the authority which he truly states is solely vested in state boards." Once more I must protest that this, although true, is irrelevant. The council does not seek this authority, has no use for it, has not asked for it, has not assumed it and has not hinted that it intends so to do.

Dr Harrison again says "These medical boards are capable of fulfilling the duties and responsibilities with which they are charged by the state, and do not require unauthorized persons or associations to measure their authority or to perform their legal duties." This is very gratifying information notwithstanding its insinuations. What the "capabilities" of the various examining boards are I do not pretend to say. It is my

humble opinion, however, that the boards are not all dominated by men who have given as much serious thought to this subject as has Dr. Harrison and they have not all done such good work. I am further of the opinion that these boards have not done all they should or could have done and that there are many problems yet unsolved. There is yet much want of harmony of thought and action and purpose. There are too many men going around with chips on their shoulders, fearing some one is going to "usurp" something and afraid of honest, fearless discussion, jealous of every plan not suggested by themselves. If the profession is wholly satisfied with the "capabilities" of the various boards why all this discontent in the ranks?

Dr. Harrison "diffidently" begs leave to inform me that some four years ago a confederation of state medical boards was founded and that this confederation has succeeded in establishing practical reciprocity with some twenty one states, including Dr. Webster's own late Illinois. It has also adopted an itemized standard of preliminary and medical education, which standard has also been adopted and is now being enforced by the Association of American Medical Colleges.

I beg leave to inform Dr. Harrison without any dissidence whatever that the National Confederation of State Medical Licensing Boards was founded about ten years earlier than the American Confederation—that the former was the first organization of its kind in the United States to adopt a standard curriculum—that said standard was adopted at New Orleans, May 1, 1901 and modified and again adopted at Atlantic City, June, 1901—that it was proposed by myself, as chairman of the committee on curriculum—that it was modified the next year by me and that it was substantially this standard curriculum which was adopted without any important modification by the Association of American Medical Colleges, April 10, 1905, and by the American Confederation April 27, 1905.

In this connection I beg leave to quote a part of a personal letter from Dr. G. M. Kober, of Washington, D. C., chairman of curriculum committee of Association of American Medical Colleges dated May 15, 1905 referring to the value of a standard curricula and their adoption by American Confederation and by the Association of American Medical Colleges in which he says: "In this connection I desire to place myself on record in saying that whatever has been accomplished in this direction during the past year is entirely due to the splendid work which you have performed in this field for over five years, and no one at all familiar with your painstaking tabulations and reports can fail to appreciate the magnitude and immense value of your work, without which my own labors and those of the committee of the Association of American Medical Colleges would have been impossible."

The credit of having first adopted a standard curriculum does not belong to the American Confederation, but to the National Confederation. If these organizations, including Dr. Harrison's confederation were so ready to adopt a standard uniform curriculum—more or less arbitrary and imperfect though it was, constructed by myself alone, without any legislative authority, without any co-operation of the schools—how much more likely will they and the colleges and examining boards be to adopt a standard if constructed in accordance with the proposed plan?

I beg leave further to inform Dr. Harrison that the Illinois State Board of Health was the first in the Union to offer to reciprocate, and that its first reciprocity resolution was passed Oct. 10, 1899, and it was reciprocating before the American Confederation was born.

His "seventh" in regard to the three schools of practice, and "that no one school, however preponderating (?) its membership, has the authority to settle such a vital question as reciprocity," is true, but irrelevant. If I even remotely suggested such a thing, I am still unaware of the fact. In my plan for a committee on entrance requirements and on standard curriculum it is proposed that the state examining boards be represented, and there is not one word which, even by implication, excludes any school of practice from serving on such committees.

But suppose the committees are made up wholly from the regular school. Let us inquire in what important respects the education of a homeopath or eclectic differs from a regular. All three attend seven years at the grammar school, all three attend the same high school for four years, pursuing the same

studies, all three obtain an arts degree after three or four years of study, all three attend medical colleges in which twenty out of the twenty three subjects in the curriculum are studied from the same textbooks. In eighteen or nineteen years of study and preparation, a paltry few hundred hours of instruction in materia medica and therapeutics, in which the teaching differs. Would not such eclectics and homeopaths be willing to adopt such a general educational plan if its value, fairness and desirability were demonstrated to them, even though they had no part in its creation? Must one take an active part in the writing of the Bible before he can subscribe to its teaching?

I wish to say, in conclusion, that there is no desire or intention on the part of the Council on Medical Education of the American Medical Association to usurp any of the functions or prerogatives or powers of the examining boards. There is, however, a strong desire to assist these boards and organizations in improving and elevating the standards of entrance requirements and of medical education in every way possible, and to promote harmony and secure intelligent co-operation, and, coupled with this, the confident expectation that interstate reciprocity will follow naturally and legitimately. **GEORGE W. WEBSTER,**

Organization in Oregon—Further Discussion

PORTLAND, ORE., Feb 10, 1906

To the Editor.—Obedient to the call of its president, the City and County Medical Society of Portland, Ore., convened Jan. 3, 1906, to take action on a letter written by Dr. McCormack to THE JOURNAL of the American Medical Association under the caption, "Oregon Practically an Unorganized State," and also on an editorial which appeared in the same issue of THE JOURNAL based on the letter in question.

The meeting of the society was the largest and most representative in its history, and the discussion which took place was general and of the most animated character. The consensus of thought at the meeting was unanimous and the opinion prevailed that Dr. McCormack by his letter to THE JOURNAL and THE JOURNAL by its editorial did grievous wrong to the profession of Oregon and to its organized societies by publishing the aforesaid letter and editorial and circulating them broadcast, to the detriment of the fair name and credit of the profession of the State of Oregon—a profession, forsooth, which demonstrated beyond all question and cavil its title to being united and well organized, by giving to the American Medical Association one of the most successful sessions that it has ever held.

It is recalled that Dr. McCormack delivered an address to the City and County Medical Society on "Organization," and that at no part of his discourse was there even as much as a hint dropped that his mind harbored such painful impressions concerning the profession of the state and the evils which were corroding and corrupting it. On the contrary, his words carried with them warmth and comfort and made every one feel that he himself felt that his work of organization in the state was satisfactory and sufficient.

Dr. McCormack is reminded that in the discussion which followed his excellent and most interesting address at the meeting referred to there was a very frank avowal of those minor dissensions and differences which exist in all societies, but which found no deeper root in the Portland Society and the profession at large of the State of Oregon than elsewhere, and which were nothing more than surface manifestations of antagonisms which are normal in the modern, strenuous, competitive life.

The City and County Medical Society of Portland, for itself and for the profession of the State of Oregon, resents the charges made in Dr. McCormack's letter and in the editorial columns of THE JOURNAL of the American Medical Association, and characterizes them as unjust and unwarranted.

The society resents and denies the charge that a factional spirit exists obviously in the society that is responsible for the demoralization of the profession throughout the state, and on behalf of its own membership denies the charge that it is divided by factions and that factional spirit is so rife that the society consumes its energies in its internal discords, thereby

nullifying useful effort and hindering all progress, and in answer thereto affirms that the record will show to the unprejudiced investigator that the society has not fallen far short from fulfilling its duties and obligations to the public, to the society and to the profession in all the varied relations that interact between them

The society resents the charge and denies the truth of the allegation that the most influential members of the profession are outside of the society, and in answer thereto it states that the best elements of the profession are within the society, that the society is actuated by a broad and liberal spirit and has always evinced a readiness and willingness to welcome within its ranks all reputable professional men and women, that it has blackballed none but those who were proved unworthy of being enrolled in its membership on account of flagrant acts of unprofessional conduct.

On behalf of the regular practitioners of the State of Oregon the society resents and characterizes the statement as misleading, mischievous and false that "the average grade of the profession is low and the spirit non progressive," and in answer thereto respectfully affirms that the great majority (fully 80 per cent) of the professional men in the State of Oregon now in active practice are graduates of medical schools in excellent standing from the eastern and southern states and from the middle west, and that the charge carries with it a reflection on these schools and the imputation that their graduates and alumni are not worthy or well qualified, and in further answer thereto it is affirmed that it is the progressive spirit which prompts men in all stations in life and all callings to go far and wide for their chosen spheres of work—that the spirit of the west stands for progress and forever proclaims enterprise

In behalf of the district and county societies of Oregon, which have not escaped Dr McCormack's denunciation, the Portland Society avers at this time nothing, inasmuch as Dr McCormack has so recently visited them, and is, therefore, presumably the better qualified to judge. But in defense of those pioneers of the profession who are striving, under great disadvantages, with limited facilities for communication, to set afoot the intricate and difficult work of organization, it reserves the right to challenge the wisdom of administering a word of rebuke where a timely word of encouragement was most needed

In defense of the medical schools of the State of Oregon, which are charged with imparting an indifferent standard of medical education, the society has carefully noted Dr Joseph's letter to THE JOURNAL of the American Medical Association in its issue of Jan 13, 1906, and, approving its tenor and spirit, commends it to all those who desire to learn the truth regarding the status of medical education in the State of Oregon, and in this connection the society begs leave to say that Dr Joseph, who has been the dean of the faculty of the Medical Department of the Oregon State University for nearly twenty years has devoted his best thought and efforts in furtherance of higher standards, and in the prosecution of his work he has enjoyed the undivided support of his colleagues in the faculty, most of whom, being graduates of the best eastern schools, with subsequent European training, are, therefore, pledged to the principle of higher education, and the same may be said regarding the Medical Department of the Willamette University at Salem

The society has not at its disposal at this time a transcript of the records of the State Board of Medical Examiners, but it believes that the board is striving earnestly to fulfill its functions and to execute the law. The society believes that in its own defense the State Board of Medical Examiners can refute the charges preferred against it by Dr McCormack that its low standards of requirements have made the State of Oregon the dumping ground for low grade men who have failed to pass their examinations in neighboring or even distant states. The law is admitted to be defective, but it was the best that could be enacted at the time, and it marked a great forward step, which the society believes will soon be followed by another and greater

In answer to the charge that the professional fees in the State of Oregon are based on a low standard, the question can be easily solved by reference to the City and County Medical Society fee schedule, which will convince the most skeptical

that, while the schedule may be low in spots, the average is higher—infinately higher—than the average fees in eastern states and the middle west, and will compare very closely with the higher schedules of California and Washington

The society, acknowledging no disposition on its part to defend the baseness of those who confessed to Dr McCormack a willingness to debauch their profession and to reduce it with all its glorious traditions to the level of a paltry trade, admits the existence of such evils as Dr McCormack refers to as "commercialism, division of fees, lodge and other forms of contract practice and kindred evils," but it makes an emphatic denial to the charges that these evils are more pronounced and widespread in the State of Oregon than elsewhere, and Dr McCormack is respectfully informed that these evils were unheard of and unknown in the State of Oregon until a few short years ago, that the origin of this epidemic or pandemic disorder has been traced to the east and south and middle west, that it has crept slowly to the west, where it has found only limited and partial lodgment, and, furthermore, that the devotees of this nefarious traffic are now known, marked and doomed to the obliquity that awaits them

Finally, the City and County Medical Society of Portland, for the profession which it represents and for itself, confessing frankly its shortcomings and imperfections and admitting the existence of faults and flaws in its organization, for which at all times it respectfully solicits the aid and co operation of the parent organization and the wise councils of its accredited representatives, always, however, in respectful form and with due regard to the amenities of polite life, exercises at this time its right to challenge both Dr McCormack, who is counted an accredited representative of the American Medical Association, and THE JOURNAL of the American Medical Association to establish proofs of the charges and allegation, all of which are herein and hereby categorically denied

Always mindful of the splendid service that THE JOURNAL of the American Medical Association has rendered and is rendering the medical profession, and its courteous recognition of the efforts of the profession of Oregon at the last session of the American Medical Association, and mindful, also, of the conspicuous service which Dr McCormack has rendered the profession as missionary in the work of organization and in the interest of higher standards, both in ethics and practice, we remain, for the City and County Medical Society of Portland,

HENRY WALDO COE,

President City and County Medical Society

GEORGE F WILSON,

President Oregon State Medical Society

WALTER E CAREL,

Ex President Oregon State Board of Medical Examiners

KENNETH A J MACKENZIE,

Second Vice-President American Medical Association

P S—On account of the unavoidable absence of members of the committee from the state, the transmission of the letter was delayed for a considerable time

DR MCCORMACK'S COMMENTS

To the Editor —Reading between the lines of the committee's communication, as was the case with Dr Joseph's letter as to educational matters, there is such constant admission of the discord, commercialism and other evils indicated by me that, but for the repeated declaration that what I had said was "misleading, mischievous and false," and the reiterated challenge that both THE JOURNAL and myself "make good" in the matter, any further comment from me would be unnecessary. As it is, I take up the matter again very reluctantly, embarrassed by the abundance of the corroborative testimony which has come to my hands without seeking, by the seeming harshness of some of the expressions quoted, for which I am not responsible, and still more by the fear of again being misunderstood by leaders so long oversensitive with each other that the most kindly expressed and best intended criticisms were made a new occasion of discord, instead of promoting harmony

I have before me the published proceedings of the meeting at which this committee was appointed. It was held to consider my report, but the factions went so far afield in protracted and angry crimination and recrimination over matters almost en

truly foreign to it as to keep the presiding officer busy preserving order and make what I said of discord seem mild. The profession of Oregon has seen the account of these proceedings, as a number of copies were sent me from out in the state, and it could serve no useful purpose for others to know more of them. The committee says it was an animated meeting and it certainly was. On the subject of discord between the leaders of the profession I also quote from a letter of Dr. Walter Brown, Clatskanie, Ore., in the current number of the *Medical Sentinel* (Dr. Coe's journal):

"I will relate an incident in my own experience. About two years ago a fairly intelligent well-to-do doctor consulted me. His case was so plainly and unmistakably a surgical one that I advised him to go to Portland and have an operation performed. I mentioned three surgeons and told him to consult any or all of them. It took of remaining in Portland six or eight weeks as he should have done, he returned in ten or twelve days. He anticipated my surprise and said, 'Doctor, the surgeons in Portland are a pack of snappers, machine covets.' I called on Dr. No. 1, he treated me courteously and told me what would have to be done, etc. I next called on Dr. No. 2, and he treated me very politely, but when I told him what Dr. No. 1 had said about my case, I saw he did not like it a bit. Dr. No. 3 was even worse. When I went back to Dr. No. 1 and told him what Drs. Nos. 2 and 3 had said about my case, he grew furious. So I decided about all they cared for was the size of the wad they could get out of me and each was afraid the other would get it and I said to myself they could go to hell. I went to see that Chinese doctor. He treated me for a while, and I felt so much better that he told me I could come home and he would treat me by mail. It is barely possible that you can imagine my chagrin and mortification at this recital. But I will add that this man had to make a business trip to the home of the city of the A. M. A. Journal and while there had an operation performed."

In regard to the administration of the medical law I submit the following letter from one who reports an actual experience:

—Ore., Jan. 6, 1906

"Dr. J. N. McCormack, Bowling Green, Ky.

Dear Doctor—From the enclosed clipping (Portland *Oregonian*) you will see that your missionary work in our state has already done some good, and I wish to congratulate you for telling the truth so well. Your criticism of the State Board of Medical Examiners was especially timely, for I believe that no poorer board ever existed and the standard of the profession can never be raised until a new board is formed.

"When I took the examination for my license some four years ago, it was ludicrously easy, and yet every man, with the exception of Dr. Clouchek—an Ann Arbor graduate—and myself, cribbed very openly, in plain view of the examiner in charge. The common method was to copy the examination directly from books which they had either on the desks or on their laps, but a few had been industrious enough to prepare 'ponies.' In the anatomy examination, when one old fellow couldn't find what he wanted in the book, Dr. ——— very kindly wrote out the answer and said, 'That's the way I want it answered,' and then winked very broadly at me as he handed it to him. The evening after Dr. ——— examinations, we met him as we were coming out of the Marquam Theater, and Dr. Clouchek asked him why he didn't try to stop the cribbing which was so flagrant and disgusting. He replied that the board had decided that any man who was bright enough to crib was bright enough to pass any examination they might give him.

"After some hesitation I joined the local branch of the State Medical Society some two years ago. Were it not compulsory to belong to it in order to remain in good standing in the American Medical Association I would certainly withdraw from the same.

"Trusting that I have served to help convince you that the criticisms you made were justified, and that the state needs a new board of examiners, I am,

"Yours very truly, ———"

[1 The current number of the *Medical Sentinel* states that all three of these physicians have since left the state.—Ed.]

To show that was not an isolated example, I quote again from Dr. Brown's letter in Dr. Coe's journal:

"At the time of my examination I saw applicants consulting notes and books pretty freely in making out their papers, however, that has nothing to do with the grade of the examination or the examiner, but it was the faulty method of holding the examination."

Similar support could be given for every other material statement made by me if necessary. In this connection it may be proper for me to say that I did not make the acquaintance or receive a word of information from any physician in Portland who was not a member of the City and County Society, and that I have used no letters or information since not furnished by the members of that organization or the State Society. That my purposes were not so generally misunderstood, even in Portland, except by those who are such important factors in the conditions criticised, I quote the following from one of the most prominent of the younger physicians, a kind of letter which might be multiplied indefinitely from out in the state:

—Portland, Ore., Dec. 16, 1905

"My Dear Doctor—I wish to commend you on your article in *THE JOURNAL* of December 9, and I hope, representing as I do the younger profession, that the influence of your recent visit and your just and timely criticism of our organization will soon bear fruit. The profession has been coming closer and closer together the last few years, and you have given this coalescence a marked impetus.

"I hope you can come to Oregon again, I hope you will make definite plans to do so, because in just such sections your influence on those who are stubborn, and encouragement to those who are striving, is just what is needed."

And at a later date the following from the same gentleman:

"I am sorry that many of the members of the society to which I belong have taken the wrong view of your communication to *THE JOURNAL* on the Oregon organization, and I hope the committee, which was appointed to reply to you will 'cool off' a little and consider the spirit in which you wrote the communication, and the motives which prompted you in doing so.

"The wording of your criticism was taken very literally, and very much to heart but it is one of those misunderstandings which will be adjusted in the course of time and soothed down by the cooling balm of sober second thought.

"With the compliments of the season, I am

"Very truly yours,

—————"

If space permits, Mr. Editor, I will join in the request that my article and the correspondence with Dr. Joseph be reproduced as an introduction to the report of the committee, that the whole subject may be considered together, and especially that the kind and conciliatory spirit which has actuated me from the beginning may be extended to the enforced introduction of matter here which might otherwise seem harsh.

In conclusion, this visit to the Pacific Coast had long been in contemplation and had no connection with the session of the Association in Portland. While a representative of that body, I alone am responsible for my conclusions and for their publication, and if there seems anything ungracious on the part of the Association, or in the editorial comments of *THE JOURNAL*, which were based on what had been reported by me, I ask that the entire responsibility be laid at my door. It was all said in a spirit of kindness, which no misunderstanding there can either pervert or alter. Such factionalism and rivalry as exists in Portland, estranging, as it does, the families and friends of these excellent, worthy men, is not normal, healthful or universal, as the committee, from long familiarity with such conditions, insists and believes, and is no less hurtful to every interest of both the profession and people because it continues in some other equally unfortunate localities. If these gentlemen would only be as kind and generous with each other in their every day relations as they are to visitors, these conditions would soon be ancient history, as they should be. No one

[2 It is our opinion that no good will be accomplished by taking the space to reproduce the communications referred to. Those who are anxious to read them will find the communications in *THE JOURNAL*, Dec. 9, 1905 pp. 1804 and 1818.—Ed.]

would be more benefited by such hearty, cordial co operation than these leaders and surgeons, and lesser benefits would soon extend to every other physician, and especially to the younger element in the profession, and I again urge that it be tried, confident, from long experience and observation, that it will do all that is promised

J N McCORMACK

Medical Forgeries—the Hagen Burger Case

DENVER, Feb 19, 1906

To the Editor —Dr J C Connell's letter in THE JOURNAL, February 17, contains certain misleading statements relative to the now famous Hagen Burger case that I can not allow to go without correction. By reference to my article on "Medical Forgeries" in THE JOURNAL, February 3, it will be seen that in the second paragraph of his letter he has misquoted the sentence relative to the power of revocation vested in the Colorado licensing board. He has changed the past tense of the verb to have to the present

In criticising the board's failure to convict Hagen Burger of the criminal charge still pending against him, as compared with the inability, thus far, of the Queen's University senate to revoke the diploma when they know was secured on fraudulent representation, Dr Connell fails to take into consideration the greater difficulty one encounters in securing a conviction on a criminal charge than in prosecuting a civil suit. Further more, under the old Colorado statute extradition was impossible, and he should not criticise us for failure to convict a fugitive from justice.

I am not aware of apologizing for allowing Hagen Burger to escape conviction of the charge still pending in Colorado, nor is there anything in my article threatening to "place certain disabilities on all Queen's College graduates coming to Colorado." The Colorado board and the plan of medical licensure are too broad in their treatment of applicants for license to resort to anything so small. No qualified graduate of Queen's University need fear mistreatment at our hands.

The following from my article with reference to the action of the senate does not sound like criticising Queen's University for not "immediately canceling the degree granted to Hagen Burger"

"Their senate is now conducting an investigation of the case in which those of their faculty in charge of matriculation and examination of candidates for graduation were most ingloriously duped, and to do other than to revoke the diploma granted Hagen Burger by their college would gain that institution a most unenviable reputation with the medical boards throughout the world."

Why will not Dr Connell frankly admit that the faculty was duped by the oleaginous Teuton, and proceed as vigorously as the Canadian law will permit to revoke his diploma obtained by securing advanced standing through fraud? A trip to Europe is not necessary to prove it.

S D VAN METER,

Secretary Treasurer Colorado State Board of Medical Examiners

Pauper Fees by Wealthy Corporations.

BEDFORD, IND, Feb 19, 1906

To the Editor —I inclose a schedule of fees of the Maryland Casualty Company, Baltimore. The Maryland Casualty Company is sending this schedule to all physicians who act for them, and possibly some physicians will sign the schedule without considering that it means just about one-half of the former fees. I wrote the company that it would be impossible for me to sign it. For such a company, in its present prosperous condition to ask us to accept such inadequate fees is simply preposterous. The idea of a surgeon accepting \$3 for amputating a finger or \$15 for trephining! If the profession will stand together it will be much better off.

C H EMERY

[The schedule of fees, which has been referred to by several correspondents, asks surgeons to make visits where minor surgical operations are required such as contused, incised or lacerated wounds for \$1. This amount is paid also for the removal of foreign bodies from the eye.

Three dollars for the amputation of fingers for reduction of fractures of the hands or feet or for dislocation of the bones

of the hands or feet, or for ligating an artery below the knee or elbow

The generous fee allowed for dislocation of the shoulder, elbow, wrist, ankle or jaw, or for treating fractures of the scapula, fibula, clavicle, ribs, arm, forearm or jaw, is \$5

For fracture of the femur, tibia or patella, \$10

The liberal allowance of \$15 is made for trephining the skull, removing the eye, reducing a dislocation of the hip joint or amputating the forearm, or for the excision of the larger joints except the hip joint

The company becomes extremely generous toward the end and gives \$25 for amputation of the hip or shoulder joint, or excision of the hip joint, or for amputation of the thigh or of the leg

Then, if more than one patient is treated in the same locality and at the same visit, the above charge is allowed for one, but for all over one only one-half is allowed. Further, if the person injured has received more than one injury the surgeon is paid for treating the most serious injury only, and so on

We agree with our correspondent that if the profession will stand together they will not be insulted with such contemptible offers as those made by the Maryland Casualty Company of Baltimore.—Ed J

Quinin in Pneumonia

ALBUQUERQUE, N M., Feb 19, 1906

To the Editor —I have read with great interest the article "Pneumonia" appearing in THE JOURNAL, Feb 10, 1906, by Dr W J Galbraith. Why Dr Galbraith should claim originality in this course of treatment, however, I fail to see. Dr A J Giesy, attending physician to the Good Samaritan Hospital, Portland, Ore., pursued the course of treatment, to my knowledge, in 1894, and how much earlier I do not know, and as house physician to the Good Samaritan Hospital at that time I have repeatedly administered, by Dr Giesy's directions, from 30 to 50 grains of quinin at the initial dose and have pursued a like course at different times during the subsequent twelve years. I do not, by any means, think that this measure should be put forth as a matter of routine, but many patients in the first stage of pneumonia are doubtless greatly benefited, and it may abort a case—if one's judgment of such an event is to be accepted.

J B CUTTER, M.D.,

Surgeon in Charge, Santa Fé Coast Line Hospital

Marriages

HENRY W HERYFORD, M.D., Anderson, Cal, to Mrs C E Corbin of Springfield, Mo

HARRY J BRUGGE, M.D., to Miss Mary Elizabeth Morrison, both of Chicago, February 7

P H WILLIAMS, M.D., to Miss Sibyl Stafford, both of Paintsville, Ky, February 12

E D JACKSON, M.D., Newcastle, Pa, to Miss Sue Anderson of La Rue, Ohio, February 16

ROBERT N CUMMINGS, M.D., Emmett Idaho, to Miss Harriet Reynolds of Boston, February 19

DANIEL A STINE, M.D., to Miss Florence Rebecca Harris, both of Philadelphia, February 14

WILLIAM WHITALL REQUARDT, M.D., to Miss Cheslev Chen-ton, both of Baltimore, February 10

MARTIN M GROVE, M.D., Dell Rapids, S D, to Miss Grace Fiske, at Plainview, Minn., January 1

CHARLES R DANCER, M.D., Fort Wayne, Ind, to Miss Catherine Rush of Waveland, Ind., February 19

EDWARD W WEBER, M.D., White Plains, N Y, to Miss Eleanor Jackson of Ottawa, Ont, February 7

CLEMENT ELLIS COOPER, M.D., Cross Keys, Va, to Miss Hallie Ramsey, at Alexandria, Va, February 21

J GEMMILL CHICHESTER, M.D., Redfield, S D, to Miss Frances Reeves Mettler of Chicago, February 24

FRANCIS A SUTORIUS, M.D., Denver, Colo, to Miss Adelaide N Shell of New York City, at Burlington, Iowa, February 14

HARRY C MAXMILLER, M.D., Newport, Kv, to Miss Ednah Tinker Gruwell of Los Angeles, Cal, at Bluffton, Ind, February 22

Deaths

Thomas Ross, M.D. McGill University Medical Department, Montreal, 1863, a member of the American Medical Association, ex president secretary and assistant secretary of the Medical Society of the State of California, president of the Sacramento Society for Medical Improvement, a member and for eight years president of the Sacramento board of health, physician to the Southern Pacific Railroad Hospital, in 1878 county physician of Yolo County, and for a long time secretary of the Woodland board of health, died at his home in Sacramento February 11, from cerebral hemorrhage, after an illness of three weeks, aged 65.

Thomas J. Bergen, M.D. Department of Medicine of the University of Pennsylvania Philadelphia 1879 surgeon of the First Pennsylvania Infantry during the Civil War, for more than twenty years a member of the staff of St. Elizabeth's Hospital, Utica, and a member of the active or consulting staff of the Utica General Hospital since its foundation, a member of the board of charities and later of the board of town auditors of Utica, a member of the Oneida County Medical Society, died at his home in Utica from heart disease, February 15 after an illness of three months, aged 72.

William Wilson Torrence, M.D. Rush Medical College, Chicago, 1880 a member of the American Medical Association, Illinois State Medical Society and Black Hills Medical Society, honorary member of the North Central Illinois Medical Association, member of the American Association for the Advancement of Science, formerly a well known physician of Deadwood, S. D. and prior to that time a missionary of the Presbyterian board in Teheran, Persia, and physician to the Shah, died at St. Joseph's Hospital, Denver, February 13, after a long illness, aged 50.

Wesley Davis, M.D. Harvard University Medical School, Boston 1866 a member of the American Medical Association for many years a veteran of the Civil War, counselor of the Massachusetts Medical Society, a member of the visiting staff and for a long time a trustee and president of the board of trustees of the Worcester City Hospital, one of the oldest practitioners of Worcester, died at his home in that city from cerebral hemorrhage, after an illness of two weeks, aged 65.

Thomas Kelley, M.D. Rush Medical College, Chicago, 1871, a veteran of the Civil War, for thirty five years a physician of the Santa Clara Valley, Cal., for one term county physician, and once president of the Santa Clara County Medical Society, from 1899 to 1901 postmaster of San Jose, Cal., died at his home in that city February 11, from fatty degeneration of the heart, after a long illness, aged 69.

Thomas Chappell Cook, M.D. Department of Medicine of the University of Pennsylvania Philadelphia, 1859, health physician of Colorado County, Texas for several years, assistant surgeon of the First Texas Heavy Artillery, C. S. A. during the Civil War, a member of the state legislature in 1885 and 1886, died at his home in Weimar, Texas, February 19, from nephritis, after a long illness, aged 69.

James B. Sherry, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia 1868, a veteran of the Civil War, for several terms medical director of the Department of Massachusetts G. A. R., a member of the Fusilier Veteran Association and of the Ancient and Honorable Artillery Company, died at his home in Boston, February 21, from heart disease, aged 62.

George W. Stone, M.D. Bellevue Hospital Medical College New York City, 1876, a member of the American Medical Association, and one of the most highly esteemed practitioners of Lapeer County, Mich., for more than twenty years a member of the school board, died at his home in Metamora, Mich., February 13, from heart disease, after an illness of a year, aged 60.

William Valentine McKenzie, M.D. College of Physicians and Surgeons in the city of New York, 1884, a member and president of the Middlesex County (N. J.) Medical Society, and president of the board of education and a member of the board of health of Metuchen, died at his home in that city, February 13, after an illness of four months, aged 44.

Alfred Martin Vollmer, M.D. American Medical Missionary College, Chicago, 1902, a member of the American Medical Association, for two years a practitioner in Apia, Samoa, and vice consul general of the United States at that point, died at his home in Milton, Wis., February 15, from pulmonary tuberculosis, after an illness of several months, aged 30.

David Fawdrey, M.D. College of Physicians and Surgeons in the City of New York, 1864, the oldest practitioner of Watertown, N. Y., a medical cadet in the Army, and later a surgeon in the United States Navy during the Civil War, died in Watertown while making a professional call, February 13, from cerebral hemorrhage, aged 68.

Francis E. North, M.D. College of Physicians and Surgeons, Chicago, of Taylorville, Ill., a member of the Illinois State Medical Society and Christian County Medical Society, died at the Missouri Baptist Sanitarium, St. Louis, February 20, from intestinal obstruction, eight days after an operation for appendicitis, aged 27.

William E. Mattison, M.D. College of Physicians and Surgeons in the City of New York, 1852, surgeon of the Third New Jersey Volunteer Infantry during the Civil War, for many years justice of the peace of North Plainfield, N. J., died at his home in that city, February 11, from heart disease, aged 82.

Warren P. Blake, M.D. Dartmouth Medical School, Hanover, N. H., 1881, a member of the Springfield Medical Club, Hampden District Medical Society and Massachusetts Medical Society, died at his home in Springfield, Mass., February 15, from disease of the liver, after an illness of two months, aged 47.

William Barber, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1865, one of the oldest practitioners of Waverly, Iowa, once coroner of Bremer County, a surgeon during the Civil War, died in Waverly, from heart disease, February 10, after a short illness, aged 75.

A. Henry Butts, M.D. Medical College of Virginia, Richmond, 1859, a surgeon in the Confederate service during the Civil War and until a few months ago a practitioner of Greenville, Monroe County, W. Va. died at his home in Charleston, W. Va., February 7, from pneumonia, aged 72.

William H. Murphy, M.D. Department of Medicine of the University of Pennsylvania Philadelphia 1899, a famous Yale athlete and coach, athletic instructor in the United States Naval Academy, Annapolis, Md., died in Westboro, Mass., February 14, aged 35.

John H. Cochran, M.D. New York University, New York City, 1867 of The Plains, Va. a veteran of the Civil War; representative of Fauquier and Loudon counties in the Virginia legislature died in Richmond, February 24, from cerebral hemorrhage, aged 63.

James M. Rix, M.D. Bellevue Hospital Medical College, New York City, 1868 a Civil War veteran, some time member of the school board of Warner, N. H., died at his home in that place, February 16, from cholelithiasis, after an illness of a year, aged 72.

Andrew Milton Miller, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1889, for several years health officer of Alpena, Mich., died from malignant disease of the stomach at his home in Detroit, February 16, aged 42.

Pennick Browning Rogers, M.D. Department of Medicine of the University of Pennsylvania Philadelphia, a member of the staff of the Manhattan Eye and Ear Hospital, New York City, died in New York, February 11, from pneumonia, aged 25.

Eley H. Harrison, M.D. University of Nashville (Tenn.) Medical Department, 1896, city physician of Texarkana, Texas, for two years, died at a sanitarium in Memphis, Tenn., February 15, after an operation for appendicitis, aged 35.

Charles H. Chubb, M.D. Jefferson Medical College, Philadelphia, 1856, of Palenville, N. Y., for a number of years president of the Greene County (N. Y.) Medical Society, died in Mount Vernon, N. Y., February 16, aged 72.

Howard Carey, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1885, of Tenstrike, Minn., died at the Beltrami County Hospital, Bemidji, Minn., from nephritis, February 13, after a long illness.

David Onslow Smith, M.D. Harvard University Medical School, Boston, 1850, well known as a physician and musical composer, died at his home in Hudson Center, N. H., February 15, after a long and painful illness, aged 82.

Harry Martyn Brace, M.D. College of Physicians and Surgeons in the City of New York, 1881, mayor of Perth Amboy, N. J., died at his home in that city, February 19, from nephritis, after an illness of six months, aged 46.

Benjamin B. Ferguson, M.D. Jefferson Medical College, Philadelphia, 1893, a member of the Camden County Medical Society, died suddenly at his home in Camden, N. J., February 12, from cerebral hemorrhage, aged 53.

Benjamin Franklin Grant, M.D. Homeopathic Hospital College, Cleveland, Ohio, 1867, of Bath, N. Y., died at the Coburn Sanitarium in that city, February 17, from general nervous breakdown, after a long illness, aged 78

L. A. Wilson, M.D. St. Louis Medical College, 1864, assistant surgeon of the Forty-fourth Missouri Volunteer Infantry during the Civil War, died at his home in Cuba, Mo., February 17, after a short illness, aged 78

A. Perry Bowman, M.D. Chicago Homeopathic Medical College, 1878, president of the Iowa Homeopathic Medical Society, died suddenly at his home in Sioux City, from heart disease, February 19, aged 49

William Gaines Kibbe, M.D. Tulane University of Louisiana Medical Department, New Orleans, 1878, a Confederate veteran, of Abbeville, La., died suddenly from apoplexy in that city, February 12, aged 64

Eleanor Rolshausen, M.D. Woman's Medical College of Chicago, formerly of Logansport, county physician of Cass County, Ind., for two terms, died at her home in Royal Center, Ind., February 12, aged 72

James Murphy, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1866, died at his home in Bangor, Mich., February 13, from cerebral hemorrhage, after a short illness, aged 63

Hugh J. Sullivan, M.D. University of Wooster Medical Department, Cleveland, Ohio, 1889, coroner of Wayne County, Ohio, died at his home in Congress, from poison taken accidentally, February 24

Oliver D. Coppedge, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1857, of Concrete, Texas, died in Cuero, Texas, February 9, from pneumonia, after a short illness

W. Dixon Norwood, M.D. National Medical University of Chicago, 1895, was thrown from his buggy in a runaway accident at Shreveport, La., February 14, and almost instantly killed, aged 36

Warren Elliott Harrigan, M.D. New York University, New York City, 1885, of Williamsburg, N. Y., died suddenly from heart disease while making a professional call, February 14, aged 43

William Wallace Munn, M.D. New York University, New York City, 1868, died at his home in Lansing, Mich., February 10, after an illness of ten months from malignant disease, aged 66

E. Jansen Westfall, M.D. College of Physicians and Surgeons in the City of New York, 1871, died at his home in Rahway, N. J., February 18, from pneumonia, after a brief illness, aged 59

Walter K. Wadleigh, M.D. Dartmouth Medical School, Hanover, N. H., 1887, died at his home in Hopkinton, N. H., February 7, from nephritis, after a long illness, aged 41

John Page Burwell, M.D. Jefferson Medical College, Philadelphia, 1880, formerly of Millwood, Va., died recently in Washington, D. C., from heart disease, aged 53

William H. Cleckler, M.D. Missouri Medical College, St. Louis, 1897, of Gowen, I. T., was drowned while being ferried across Gaines Creek, near Gowen, February 12

Everett V. Hamilton, M.D. University of Louisville (Ky.) Medical Department, 1889, died at his home in Austin, Texas, February 11, from heart disease, aged 41

Jacob W. Du Bois, M.D. Bellevue Hospital Medical College, New York City, 1865, died at his home in Millersville, Md., from heart disease, February 19, aged 70

Thomas B. Lyon, M.D. Kentucky School of Medicine, Louisville, 1880, died at his home in Upland, Ind., February 8, from asthma, after a long illness, aged 53

Hermon Levi Cook, M.D. McGill University Medical Department, Montreal, 1854, died at his home in Toronto, Nov. 16, 1905, from pneumonia, aged 74

Oscar K. Johnson, M.D. Kentucky School of Medicine, Louisville 1891, died suddenly at his home in Queens, W. Va., February 18, aged 35

Morris T. Judah, M.D. (County License, Indiana, 1897), of Gent, Ind., died in Bloomington, Ind., February 14, from heart disease, aged 65

Henry W. Robertson, M.D. Harvard University Medical School Boston 1872, died recently at his home in Crapaud, P. E. I., aged 61

Charles H. Barnhardt, M.D. Jefferson Medical College, Philadelphia 1895, died at his home in Concord, N. C., February 7, from pneumonia

Edwin V. Tegart, M.D. University of the Victoria College, Coburg, Ont., 1859, died at his home in Brantford, Ont., Sept. 9, 1905, aged 70

George I. McKenzie, M.D. Jefferson Medical College, Philadelphia, 1864, died at his home in Pictou, N. S., in August, 1905, aged 67

John Gillies, M.D. McGill University Medical Department, Montreal, 1867, died at his home in Teeswater, Ont., Aug. 15, 1905, aged 68

Herman J. Van der Linden, M.D. University of Utrecht, Holland, 1884, of Delmont, S. D., died suddenly in that place, February 10

William Hunter Carson, M.D., passed assistant surgeon, U. S. P. H. and M. H. Service, died at Belize, British Honduras, July 25, 1895

D. H. Harrison, M.D. McGill University Medical Department, Montreal, 1864, died at his home in Vancouver, B. C., recently, aged 63

Benjamin A. Penn, M.D. Eclectic Medical Institute, Cincinnati, 1865, died at his home in Bryantsburg, Ind., February 10, aged 82

Mark A. Perkins, M.D. Kentucky School of Medicine, Louisville, 1887, died at his home in Hastings, Neb., February 13, aged 65

C. E. Bailey, M.D. Michigan College of Medicine, Detroit, 1881, of Orange, Mich., died recently in Ionia, Mich., aged 54

Deaths Abroad

L. de Wecker, M.D., the famous ophthalmologist, died at Paris, February 13, aged 74. He was born in Germany and studied at Berlin, Vienna and Paris, practicing as a physician in France and Russia until 1862, when he settled in Paris and devoted himself to practicing and teaching ophthalmology. It was not then taught in the medical colleges as a special science. The list of his works and of the instruments and operations which he devised is a long one.

W. H. Gilbert, M.D., died at Baden, February 11, aged 48. He was known as a popular physician, a balneologist and proprietor of a sanatorium, but his fame rests principally on his suggestion of the medical study trips, which he inaugurated six years ago with great success from the start.

A. Gusserow, M.D., professor of obstetrics and a well known writer on obstetric and gynecologic topics, died at Berlin, February 6, aged 69. He has been co-editor of the *Archiv f. Gynäkologie* since 1884.

Miscellany

TYPHOID FEVER PROPHYLAXIS

Report on the Methods Employed in the Campaign Against Typhoid in Germany

E. D. W. GREIG, B.Sc., M.B., C.M.

Captain Indian Medical Service, Deputed by the Secretary of State for India to investigate the methods.

1. INTRODUCTION

In order to study the various methods employed in the campaign against typhoid fever in Germany, permission was obtained, through the Foreign Office, for me to go to Germany and investigate the subject there. I reached Berlin Sept. 25, 1905, and was advised to study the methods, in the first instance, at the Kgl. Institut für Infektionskrankheiten. This I did until Oct. 22, 1905, on which date I proceeded to certain of the institutes for antityphoid work to study the practical application of the methods. I visited the institutes at the following places: Saarbrücken, Neunkirchen, Metz, Diedenhofen and Trier. At these places I studied the routine method of examination of the material sent in, and accompanied the superintendent on several occasions into the district to see the methods adopted in investigating outbreaks of typhoid fever in the villages. I was thus enabled to gain an insight into the practical working of antityphoid measures in Germany.

I desire to express my heartiest thanks to Professor Dr. Kirchner (*geh. ober. medicin. rat und vortragender rat im ministerium d. geistl. unterrichts u. med. angelegenheiten*) for his advice and help, to Geh. Med. Rat. Professor Dr. Gaffky, director of the Kgl. Institut für Infektionskrankheiten, and

to Prof Dr P Trosch, with whom I worked at the institute, for his constant courtesy, and to the superintendents of the institutes at Saarbrücken, Neunkirchen, Metz, Diedenhofen and Trier for affording me every facility for investigation

2 FACTS OF IMPORTANCE IN CONNECTION WITH ANTITYPHOID MEASURES

(a) Typhoid fever is spread to a large extent by the bacilli being directly carried from the sick to the healthy, e g, infection of food, the use of contaminated eating and drinking utensils etc. In this form of so-called contact infection the epidemic has a gradual onset and prolonged course. Should the bacilli gain access to a water supply used by a number of persons, then a large number of cases occur simultaneously—the so-called 'explosion epidemic'. The workers in Germany have found this latter mode of infection of comparatively rare occurrence as compared with the former.

(b) Living bacilli may continue in the feces and urine for long periods after the fever has ceased, and persons who give no history of previous attacks of typhoid fever, but who have been in contact with typhoid cases, may also harbor the bacilli in their stools. This group of cases is a very important one from the prophylactic point of view, they are the bacilli carriers of the Germans. These individuals are in fact 'reservoirs' of the parasite and play an analogous part to the wild game in Nagana, which harbor the trypanosomes without any apparent signs of disease.

(c) The disease may run a very mild course, particularly in young children, and thus a number of cases may escape observation. The detection of these cases forms a very important part of the antityphoid work.

(d) A disease closely resembling typhoid fever, clinically but caused by a totally distinct organism—*B paratyphosus*—may occur at the same time as typhoid fever.

IT IS NECESSARY TO ORGANIZE SCIENTIFIC INSTITUTES NEAR THE TYPHOID EPIDEMIC TO PUT INTO PRACTICE THE ABOVE PRINCIPLES

The German Government has founded eleven institutes, each with a superintendent and two or three trained scientific men, as well as one or two attendants, for the antityphoid campaign in Alsace Lorraine. These institutes are fully equipped for the scientific work required. They are chiefly engaged in the prevention of the spread of typhoid among the civil population. The military population, which is a large one, has a similar organization, and, the conditions being much more favorable for carrying out the antityphoid measures, the results show a satisfactory reduction of typhoid fever among the troops.

Each institute has its defined area of work, but they also keep in touch with one another. The extent of the area of work is determined by the density of population, e g, Trier, which is situated in a sparsely populated district, has a very extensive area, while those of Saarlouis, Saarbrücken and Neunkirchen are small, the population being very dense near these places. The institute receives its material from the various medical men in charge of the cases, and the members go out into the villages and towns with the district medical officer of health and investigate the details of the origin of the epidemic. As far as possible, each epidemic is traced back to its source. It is necessary to determine (i) whether cases are imported ones, (ii) whether the infection is carried by water, (iii) whether carried by food, (iv) whether carried by men affected by typhoid fever, e g, family epidemic, (v) whether a local focus of endemic typhoid, so called "typhoid house," exists. In carrying into practice these lines of investigation certain lists kept in every village are examined in the first instance, these are (a) list kept by police of reported arrivals in the village, (b) the list of attendance at the schools, (c) the sick list (*Krankenkassenlisten*), (d) the list of deaths reported. From these lists valuable information is obtained, which forms a starting point for further investigation.

It is generally found that the actual number of cases of typhoid fever far exceeds that which has been reported. The water supply, milk supply and general sanitary condition of the village are carefully inquired into, and the result of these, along with the result of the bacteriologic investigations, is entered in a special form, which is called *Fragebogen*, which contains thirty nine headings, which are classified under (1) general, i e, position and character of place, water and milk supply, etc., (2) special, which contains details regarding patient, the disinfection carried out and the result of the bacteriologic investigations, (3) result of the case, whether it ended in death or recovery, the results of final bacteriologic investigation, and what sanitary improvements have been carried out.

The suspected cases having been picked out by the help of the information obtained from the above mentioned sources, it is next necessary to examine the blood, feces and urine of each at the laboratory. The blood is taken in capillary tubes. For the urine and feces, special glass tubes, fitted with a metal spoon in the cork and carefully inclosed in a tin and wooden box, are left at the house. Directions are given to the nurse or friends to place three or four spoonfuls of the feces in one tube, which is pricked and the box carefully labeled, some urine is also placed in another tube. These are forthwith dispatched to the institute. It is important for the investigator that they should be as fresh as possible. When these are received at the laboratory they are examined at once. The result of the examination is communicated to the medical man in charge of the case and the medical officer of health, who have the necessary disinfection and isolation carried out. Where possible the isolation is carried out in special hospitals, otherwise the medical officer of health gives the necessary instructions to the friends for the isolation of the patient in the house. For the purposes of disinfection the liquor creosoti saponatus of the German Pharmacopoeia is used. The eating and drinking utensils are immersed in it. The stools and urine, which are received in special vessels, are mixed with it. After the patient is entirely free from fever, the stool and urine are examined three times at intervals of ten days, and the patients are not allowed to leave the hospital until the result of the bacteriologic investigation shows them to be free from bacilli. It is found necessary to do so three times, as relapses are not infrequent, especially in the fourth week of convalescence, in which case the examinations have to begin afresh.

Having thus considered the general plan of work, it is necessary to consider

4 TECHNIC FOR EXAMINATION OF MATERIAL FROM SUSPECTED CASES

As a matter of practical routine, the following examinations are made

(1) *Blood*—The usual Widal reaction, carried out both microscopically and macroscopically. The test is made both with typhoid and paratyphoid bacilli. It may be observed that a positive Widal reaction is no proof that the present illness of the patient is typhoid fever, but a reaction, which is at first negative and then becomes positive, is absolute proof.

(2) *Feces and Urine*—The examination of these for the presence of *B typhosus* and *paratyphosus* is all important. Unfortunately we have not yet discovered an ideal method for the detection of *B typhosus* in feces, its recovery from the urine is a simpler matter. We have not got an "enriching" process similar to the peptone water for the detection of the vibrio of cholera. The newer methods, however, are a distinct advance on our older methods, and no doubt further advances will be made.

The following are the methods used. V Drigalski and Conrad¹ Malachite green method of Lentz² Fuchsin agar method of Endo³ Caffein fuchsin agar method of Gaetgens⁴

¹ Drigalski and Conrad, *Zeitschrift für Hygiene und Infektionskrankheiten*, vol 39, 1902

² Lentz and Tietz, "Weitere Mittheilungen über die Anreicherungs-methode für Typhus und Paratyphus bazillen mittelst einer Vocultur auf malachit grün agar." From *Klinischen Jahrbuch* Gustav Fischer, Jena, 1905

³ Endo, *Centralblatt für Bakter.* vol xxv, p 109

⁴ Gaetgens, *Centralblatt für Bakteriologie* 1 abt. orig, vol xxxix, No 5, p 634

In the institutes visited, either the Drigalski-Conradi method alone was employed or in combination with the malachite green method. The Endo method was employed in Dienenhofen, as well as the others. Each method has its advantages and disadvantages, but it is certain that rapidity in detecting the typhoid colonies is largely a matter of experience and practice, and an observer who is accustomed to recognize it on one medium may fail to do so on another. The details of the mode of preparation of each of these are given.

A—PREPARATION OF DRIGALSKI-CONRADI MEDIUM

(1) *Agar Preparation*—To three pounds of finely cut horseflesh add two liters of water. Allow it to stand till next day. The expressed meat juice is boiled for one hour and filtered. Add 20.0 gr. peptone sicca, Witte 20.0 gr. nutrose, 10.0 gr. NaCl, boil one hour, now add 70 gr. bar agar then boil three hours (or one hour in autoclave) render slightly alkaline (indicator litmus paper). Filter, boil half an hour.

(2) *Litmus Solution*—Litmus solution (Kubel and Tieman) 260.0 c.c. boil for ten minutes add milk sugar (chemically pure) 30.0 gm. Boil fifteen minutes.

(3) Add the hot litmus milk sugar solution to the liquid agar solution cooled to 60 C. Shake well. Render it again faintly alkaline. The color of the froth is a good indicator. Add then 2.0 c.c. of a hot sterile solution of 10 per cent. water free soda, further add 20 c.c. of a freshly prepared solution of 0.1 gr. crystal violet B (Höchst) in 100.0 c.c. warm water (distilled).

One has now a meat water peptone-nutrose agar with 13 per cent. litmus and 0.01 per mille crystal violet. This can be poured directly into plates and the remainder kept in 200 c.c. flasks.

B—THE MALACHITE GREEN ENRICHING METHOD OF LENTZ

The proper preparation to use is malachitgrün (crystal) (Höchst) dilution 1:22,000. Preparation: Three pounds fat free flesh (oxen) finely divided macerated with two liters of water for sixteen hours. The extract is expressed, boiled for half an hour, filtered, then 3 per cent. agar added and boiled for three hours, add to the agar 1 per cent. peptone, 0.5 NaCl and 1 per cent. nutrose (this may be omitted). This is brought to the litmus neutral point by soda solution with Duplittest paper. Boiled one hour, filtered through linen. The reaction of the finished agar is sometimes distinctly acid. It is filtered into small flasks of 100-200 c.c.

Before the addition of the malachite green, the hot agar is tested by Duplittest paper and so far alkalinized with sterile soda solution until the red strip is distinctly red violet. This reaction point corresponds in agar without nutrose, to an alkaline degree of 1.8 per cent. normal soda below the phenolphthalein neutral point. If the agar contains nutrose which remains neutral toward litmus and bacteria then the alkaline reaction corresponds to 3.5 per cent. normal soda solution below the phenolphthalein point.

To 100 c.c. of the hot agar 1 c.c. of a 1:220 solution malachite green (the solution keeps good for ten days) is added, 1 c.c. agar contains 1:22,000. By this concentration of malachite green (crystal) the growth of the usual kinds of *B. coli* as well as many alkali forming organisms is greatly diminished and practically prevented. The *B. typhosus* growth is also diminished but only so far that after twenty four hours the color can be recognized with the naked eye the size of a particle of sand, while after a longer period in the incubator in two to four days larger stronger colonies appear which color the agar yellow.

The finished agar is poured at once into Petri dishes in 2 mm thick layers. The dishes are well dried.

C—THE FUCHSIN AGAR METHOD OF ENDO

In an enamel pot put two liters of water (tap) 20.0 gr. Liebig's meat extract 20 gr. peptone sicca, Witte, 10.0 NaCl and 80 gr. bar agar. Boil filter neutralize. Add 10 gr. chemically pure milk sugar and 10 c.c. of 10 per cent. crystallized fuchsin in 96 per cent. alcohol. Then the medium becomes dark red in color. Now add 25 c.c. of a 10 per cent. sodium sulphite solution. The medium becomes gradually discolored, but only completely so when the agar is still. Sterilize in small tubes for thirty minutes. Pour into plates.

D—THE CAFFEIN FUCHSIN AGAR METHOD OF GAETGENS

Preparation of the Medium—As a result of his experiments, he found that an addition of 0.33 per cent. chemically pure caffeine to Fndos medium (described above) which had an alkalinity equal to 1.5 per cent. normal KOH below the neutral point of phenolphthalein markedly increased the value of the medium as a means of detecting *B. typhosus* in the stool.

Endo medium prepared in exactly the same way as described by himself is liquefied made alkaline to the required degree and the required amount of caffeine added.

In all these methods attempts are made, with more or less success to check the growth of members of the coli group and to encourage the development of the *B. typhosus* and *paratyphosus*. In the Drigalski and Conradi method crystal violet is used in the Lentz method malachite green in the Endo fuchsin and Gaetgens caffeine. At the same time the typhoid colonies are differentiated from the coli group by a color reaction. In Drigalski the typhoid colonies are blue and the coli red. In the Endo the coli colonies turn bright red, while the typhoid colonies are colorless. In both cases the fact that *B. coli* produces acid in presence of milk sugar is made use of by in the one case litmus and the other decolorized fuchsin. A color reaction is thus obtained in both cases.

Malachite green checks the growth of both coli and typhoid very markedly but more especially coli. Accordingly when a stool is planted out on such an agar plate it may not be possible at the end of twenty four hours to detect any colonies of typhoid. Lentz has found however that if such a plate is

flooded with normal salt solution and gently rocked and then allowed to stand for a few minutes the delicate typhoid colonies diffuse themselves in the solution, while the solid coli colonies sink to the bottom, so that if a little of this fluid is plated out on Drigalski plates practically a pure growth of *B. typhosus* or *paratyphosus* may be obtained. In practice it is found that *B. paratyphosus* is readily "enriched" in this way, but the *B. typhosus* not to the same extent.

Having thus seen the method of preparation of the different culture media and principles of their use, it is next necessary to consider the method of preparation and insemination of the plates with the feces and urine. The following are the steps.

1 *Preparation of the plates*—In this investigation it is more convenient to use a larger size of Petri dish than that generally used. It should be from 15 to 20 centimeters in diameter. About 20 to 25 c.c. of the medium is poured into each plate. The plates are allowed to remain open until all the steam has evaporated and the agar is stiff. It is essential that the surface of the plates should be quite dry and firm. Contamination by air-organisms does not occur on account of the aniline dye present in the culture media.

2 *Preparation of the Feces*—The feces are thoroughly mixed with a small quantity of sterile normal salt solution. Then when one malachite green plate is used in combination with two Drigalski plates, about 0.5 c.c. of the mixture is placed on a green plate. This amount may also be used with the caffeine Endo but with the Drigalski plates alone a much smaller amount, about one or two loopfuls is sufficient.

In the case of urine several drops are placed on the green plates on the Drigalski plate one drop is sufficient.

Having thus got the prepared material on the first plate the next step is the smearing. This is done in the same way, whether green and blue, or all blue plates are used.

3 *Smearing of the Plates*—A sterile glass rod which has had its terminal an inch or two bent at right angles is used.

The material on the first plate is thoroughly smeared by rubbing the glass spatula, as it is called in all directions over the surface of the agar. Then without sterilizing it, the same spatula is rubbed over the surface of a second plate and then over a third and fourth. After the smearing the plates are allowed to stand open till quite dry. The plates are then placed in the incubator at 37 C. and left there for twenty to twenty four hours. At the end of this period the next step is examination of the colonies.

THE EXAMINATION OF THE COLONIES

It will be convenient to state briefly the characters of the colonies on the different media already mentioned.

1 *Drigalski-Conradi*—By this method the first plate is so overgrown that it is useless for further examination. The second third and fourth however are carefully inspected. It is very desirable to use a hand lens for this purpose, also to direct the plate, so that the light falls from a wall not directly from the window, as a better contrast between the colonies is obtained. After a good deal of practice it is possible to recognize immediately a colony of *B. typhosus* on the plate even if only a single one exists but at first it takes a considerable amount of time, because a large number of colonies are found which closely resemble those of *B. typhosus* and it is, therefore necessary to test each of them according to the methods described later. Broadly stated the *B. coli* colonies are more or less red in color not transparent, and from 2.6 millimeters in diameter while the *B. typhosus* colonies have a diameter of from 1 to 3 millimeters. The color is blue with a dash of violet they resemble dew drops.

2 *Combined Malachite Green and Drigalski Method*—As will be remembered, the first plate in this method was malachite green agar and the second and third Drigalski-Conradi. At the end of twenty hours the second and third plates are examined and present the same characters as noted above. If typhoid colonies are found on these plates then the investigation is finished but, if they are not, it is possible by a further procedure to detect them and this is the special merit claimed for this method. The procedure is this: the green plate is flooded with sterile normal saline and gently rocked and then allowed to stand for a few minutes. By this means it is found that the more delicate typhoid and paratyphoid colonies readily diffuse themselves in the liquid while the heavier coli colonies whose growth has been remarkably inhibited by the malachite green sink to the bottom. The glass spatula is then dipped in the salt solution and rubbed on one or two Drigalski-Conradi plates which are placed in the incubator at 37 C. for twenty hours and are then examined in the usual manner. This method of enriching gives very good results with *B. paratyphosus* the *B. typhosus* is not enriched to the same extent but still it is an additional means of detecting this organism and in the hands of Lentz has yielded good results.

3 *Endo Method*—Here all the coli colonies are bright red at the end of twenty hours and therefore very easily separated. The typhoid colonies are colorless and very transparent. A stool plated on this medium gives a very striking picture and the use of this method does not strain the eyes to the same extent as the blue plates. If a very large number of coli organisms are present the plate is liable to become entirely red and this interferes with the examination of the typhoid colonies. On the whole this medium appears a very useful one for the separation of *B. coli* and *typhosus*.

4 *Gaetgens Caffeine Fuchsin Agar*—The appearance is essentially the same as that on the Endo plates but the growth of *B. coli* is markedly inhibited.

Having thus seen the general appearance of the colonies the next step is

THE IDENTIFICATION OF SUSPECTED TYPHOID COLONIES

In practice this is done as follows. A portion of the colony is touched with a very fine platinum needle and placed in a

University of Kentucky	(1904)	75
University of the South	(1904)	75
College of P and S Baltimore	(1902)	79
Medical College of Indiana	(1904)	75
Georgetown University	(1904)	81
College of P and S Atlanta	(1902)	89
Vanderbilt University	(1890)	75

Detroit Coll of Med	FAILED	(1894)	63 3
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New Hampshire January Report.—Dr H C Morrison, regent of the State Board of Medical Examiners of New Hampshire, reports the written examination held at Concord, Jan 9 10, 1906 The number of subjects examined in was 7, total number of questions asked, 70, percentage required to pass, 75 The total number of candidates examined was 23, of whom 14 passed and 9 failed The following colleges were represented

College	PASSED	Year	Per Grad.	Cent.
Illinois Med. Coll		(1902)	75 4	
Jefferson Med. Coll		(1905)	78 7	
University of Vermont	(1904) 83 2	(1905)	83 1, 83 7	
Harvard Medical School		(1905)	83	
Baltimore Med Coll		(1903)	77 9	
Medical School of Maine		(1903)	80 3	
Medico-Chirurgical Coll Philadelphia		(1903)	80 1	
Dartmouth Medical School		(1905)	78 2	
College of P and S Boston		(1899)	76 6	
College of P and S New York		(1902)	82	
Boston University	(1896) 97	(1903)	85	

Kentucky University	FAILED	(1904)	64 1
Laval University Quebec, (1903) 66 8		(1904) 66 5	70 6 (1905)
07 3		(1901)	66 7
Bishop Med Coll Montreal		(1905)	73 8
University of Maryland		(1904)	68 0
Maryland Med Coll Baltimore		(1901)*	
Harvard University			

* No percentage given

Oregon January Report.—Dr Byron E Miller, secretary of the Board of Medical Examiners of the state of Oregon, reports the written examination held at Portland, Jan. 2 4 1906 The number of subjects examined in was 15, total number of questions asked 100, percentage required to pass, 75 The total number of candidates examined was 33, of whom 25 passed and 8 failed The following colleges were represented

College	PASSED	Year	Per Grad.	Cent.
Bennett Med Coll Chicago		(1905)	85 8	
Tulane University New Orleans		(1901)	80 8	
Iush Med. Coll (1881) 75 2	(1904) 82 6	(1904)	75 6	79 2, 79 6
Medico-Chirurgical College, Kansas City		(1900)	76 6	
Harvard University		(1902)	84 8	
University of Helsingfors Finland		(1897)	90 6	
Cooper Med. Coll San Francisco		(1892)	79 4	
University of Oregon		(1905)	77 9	83 0
College of P and S Chicago		(1899)	75 5	
University of Iowa		(1896)	78 4	
University of Pennsylvania		(1903)	82 5	
American Med. Miss Coll Chicago		(1905)	84 0	
College of P and S New York (1881) 80 6	(1901) 81 5	(1904)		
76 4				
Saginaw Valley Med. Coll		(1902)	78 7	
Georgetown University		(1901)	86 7	
University of Michigan		(1904)	85 0	
Willamette University		(1905)	76 7	
University of Minnesota		(1904)	81 1	

FAILED				
Toledo Med Coll		(1898)	73	
Chicago Med. Coll.		(1884)	73	
University of Vermont		(1905)	67	
Detroit Coll of Med		(1896)	74	
Barnes Med Coll St Louis		(1894)	74	
University of Oregon		(1905)	68	
Willamette University		(1905)	64	
Non graduate			66	

Wisconsin January Report.—Dr J V Stevens, secretary of the Wisconsin Board of Medical Examiners, reports the written examination held at Milwaukee, Jan 9 11, 1906 The number of subjects examined in was 13, total number of questions asked 120 percentage required to pass 75 The total number of candidates examined was 19 of whom 10 passed and 9 were conditioned The following colleges were represented

College	PASSED	Year	Per Grad.	Cent.
College of P and S Chicago	(1904) 85 6	(1905)	87 8	
Wisconsin Coll of P and S		(1905)	81	
Milwaukee Med Coll		(1905)	86	
Northwestern University		(1905)	87 8	
Iush Med Coll		(1905)	85 6	86 4
Detroit Coll of Med.		(1904)	79 3	
University of Michigan Homeo Dept		(1905)	85 3	
University of Minnesota		(1905)	84 9	

CONDITIONED				
College of P and S Milwaukee (2 candidates)	(1905)			
Queen's University Ontario	(1905)			
Eclectic Med. Coll. New York	(1900)			
College of I and S, St. Louis	(1907)			
Albany Med. Coll	(1887)			
Northwestern University	(1905)			
Indiana Med Coll	(1907)			
Hahnemann Med Coll Chicago	(1905)			

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U S Army, week ending Feb 24, 1906

Steer Samuel L., asst. surgeon, ordered to accompany Troops B and M, 3d Cavalry from Fort Assiniboine Montana to Iresidio of San Francisco On completion of this duty Captain Steer will return to his station

Reilly John J., asst. surgeon retired from active service with the rank of captain, on account of disability incident to the service, to date from Feb 4, 1906

McCaw W D surgeon leave of absence extended until such time as will enable him to rejoin station after return of the transport *Sumner* to New York City

Kirkpatrick Thos. J., asst. surgeon left Fort Moultrie S C on ten days leave.

Kieffer Chas T surgeon left Fort D A Russell Wyo on ten days sick leave of absence

Ruffner E L asst. surgeon left Columbus Barracks Ohio, with recruits en route to Fort Worden Wash

Byars, Caspar R. contract surgeon returned to Fort Sam Houston, Texas from leave of absence

Parkman Wallace E contract surgeon returned to Fort Assiniboine Mont., from leave of absence

Marshall John S examining and supervising dental surgeon left San Francisco for temporary duty at Honolulu H T

Waddell, Ralph W dental surgeon, left San Francisco for duty in the Philippines Division

Wing Franklin F dental surgeon relieved from duty at Fort Riley Neb and ordered to duty at Fort Omaha, Neb

Lauderdale Clarence E dental surgeon left Fort Logan H Roots, Ark and arrived at Fort Reno Okla. for duty

Whitney Walter contract surgeon left Columbus Barracks, Ohio to accompany recruits to San Francisco

Hebert Michael A contract surgeon returned from temporary duty at Fort Schuyler N Y to Fort Totten, N Y

Brewer Isaac W contract surgeon left Fort Apache Ariz and arrived at Fort Huachuca Ariz. for duty

Reagles, James contract surgeon left Fort Yellowstone Wyo and arrived at Fort Keogh Mont. for duty

Boyer Arthur I contract surgeon ordered from Kingsbridge N Y to Fort Jay N Y to accompany the 8th Infantry thence to Philippine service

Cook, William H contract surgeon ordered from Gravesend N Y to Fort Niagara N Y to accompany the 8th Infantry thence to Philippine service

Navy Changes

Changes in the Medical Corps U S Navy for the week ending Feb 24 1906

Tyree, F W acting asst surgeon detached from the Naval Training Station San Francisco and ordered to the Naval Recruiting Station, Kansas City Mo

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine Hospital Service for the seven days ending Feb 21 1906

Rosenau M J P A surgeon detailed to attend meetings of committee of American Bacteriologists in New York N Y, Feb 24 relative to the standardization of tetanus antitoxic sera

Moore, Dunlop P A surgeon relieved from duty at Yokohama Japan and directed to proceed to Honolulu Hawaii reporting to Chief Quarantine Officer for duty

Currie, D H P A surgeon department letter of July 27 1905 amended so as to grant P A Surgeon Currie twenty-one days leave of absence from July 18 1905 instead of two months

Burkhalter J T P A Surgeon, granted seven days extra leave of absence from February 24

Frissell C V acting asst. surgeon granted twenty days leave of absence from February 14

Hallet, E B acting asst surgeon granted five days leave of absence from February 19

Townsend, F acting asst. surgeon granted seven days leave of absence from February 21

Walerius M pharmacist department letter of January 30 amended so as to grant Pharmacist Walerius thirty days leave of absence from February 8 instead of February 15

BOARD CONVENED

Board of officers convened to meet at the bureau February 27 for the purpose of making physical examination of an officer of the Revenue Cutter Service detail for the board Assistant Surgeon General W J Lettiss chairman Assistant Surgeon J W Trask recorder

APPOINTMENT

Albert J Ante appointed acting assistant surgeon for duty at Port Huron Michigan

Health Reports

The following cases of smallpox, yellow fever cholera and plague have been reported to the Surgeon General Public Health and Marine Hospital Service during the week ending February 23 1906

SMALLPOX—UNITED STATES

California Los Angeles Feb 2 10 2 cases	San Francisco 13 cases
Florida Jacksonville Feb 10-17 9 cases	
Georgia Augusta Feb 12 10 10 cases	
Louisiana New Orleans Feb 10 17 17 cases	
Maine Biddeford Feb 10-17 1 case	
Maryland Baltimore Feb 10 17 4 cases	
Michigan Ann Arbor Feb 10-17 1 case	
Missouri St Louis Feb 10-17 3 cases	

Montana Missoula County, Jan 1 11, 1 case, Silverbow County, 1 case
 Nebraska South Omaha, Feb 10 17, 2 cases
 New York Buffalo Jan 10 17, 1 case, New York, Feb 10 17, 1 case
 Ohio Cincinnati Feb 9 16, 9 cases
 Tennessee Knoxville Feb 10 17, 1 case
 Wisconsin Appleton Feb 10 17, 2 cases, Milwaukee Jan 27 16, 1 case

MALARIA—MORRIS

Brazil Bahia Dec 5 0 25 cases 2 deaths Pernambuco Jan 1 17 1 death Rio de Janeiro Jan 7 17 15 cases 1 death
 Chile Antofagasta Jan 18 17 1 case 1 death
 Colombia Jan 18 17 1 case 17 deaths, Co
 China Canton Dec 11 16 10 cases Hong Kong Jan 6 17, 1 case Shanghai Dec 6 Jan 6 1 case 2 deaths
 France Paris Jan 27 16 1 case
 Great Britain Bristol Jan 27 16 5 cases
 Greece Athens Jan 17 16 1 death
 India Bombay Jan 10 17 5 deaths Calcutta Jan 6 17 55 deaths Karachi Dec 20 Jan 2 1 case Madras Jan 17 19, 12 deaths
 Japan Yokohama Jan 6 17 14 deaths
 Italy General Jan 27 16 1 case
 Mexico Tampam Jan 21 16 1 case
 Russia St. Petersburg Jan 20 17 5 cases

YELLOW FEVER—MORRIS

Brazil Rio de Janeiro Jan 7 17 5 cases 6 deaths
 Ecuador Guayaquil Jan 5 17 20 cases 12 deaths

CHOLERA—MORRIS

Philippine Islands Manila Dec 27 Jan 6, 5 cases 5 deaths, Province Jan 11, present

CHOLERA—MORRIS

India Calcutta Jan 6 17 61 deaths, Madras Jan 17 19 1 death
 Japan Yokohama Jan 6 17 1 death

TYPHOID—MORRIS

Philippine Islands Manila Dec 27 16 1 case 1 death

TYPHOID—MORRIS

Brazil Pernambuco Jan 5 17 2 deaths Rio de Janeiro Jan 7 17 1 case 1 death
 Chile Antofagasta Jan 18 17 1 case 1 death
 China Hong Kong Jan 17 17 2 cases 2 deaths
 India General Jan 6 17 1751 cases 1140 deaths Bombay Jan 10 17 1 death Calcutta Jan 6 17 16 deaths Karachi Dec 20 Jan 2 1 case 7 deaths Madras Jan 17 19 4 deaths
 Montserrat Jan 20 1 death London Jan 6 17 18 deaths
 Japan Kobe Dec 9 Jan 11 6 cases 30 deaths Jan 17 20, 2 cases 2 deaths Osaka Dec 9 Jan 11 77 cases 62 deaths
 Peru Callao Jan 12 17 1 case Lima 7 cases 5 deaths Molondo 6 cases 2 deaths Paita 1 case Trujillo 25 cases 10 deaths

Book Notices

THE GREAT TRIUMPH OF JAPAN. The Conquest of the Silent Foe By Louis Livingston Seaman, M.D., LL.D. late surgeon major U. S. Army. Cloth, 291 pages. Illustrated. Price, \$1.50. New York: D. Appleton & Company, 1906.

In the dedication of this book is given the text on which the entire argument is based and which is directly in line with Major Seaman's efforts toward the abolition of the officialism which, he claims, renders ineffective in great measure the work of the undoubtedly able men in the medical department of the United States Army. The dedication reads as follows:

"To the medical and sanitary officers of the Japanese Army, who have proved that the normal condition of the soldier is health, and that those who die in war should fall on the firing line and not by the wayside from disease, to the heroic dead of that army, who have gladly given their lives for the honor and integrity of their beloved country, to that vast army of American dead, whose lives in war have been needlessly sacrificed through preventable diseases, ignorance and incompetency, and to our lawmakers, through whom the necessary reforms can come that will prevent the repetition of such sacrifice, these lines are dedicated."

Dr. Seaman quotes from the statistics of deaths from wounds and from disease in modern wars, demonstrating that in the Russo-Japanese war the ratio was more than reversed on account of the excellence of the hygienic regulations of the Japanese medical department. Sandwiched in between arguments for the reorganization of the Medical Department of the United States Army are interesting narratives of the author's experiences in Manchuria and Japan toward and after the close of the war. He pays especial attention to the system and practice of hygiene in the Japanese Army and gives a most interesting sketch of the history of medical science in Japan. He devotes a chapter to the discussion of beri beri and its practical extinction in the navy through the researches and exertion of Baron Takaki, and closes with an appeal to the American nation that it should not forget the lessons of the War of the Rebellion and afterward of the Spanish American War, but should

follow the example of Japan and be prepared to meet emergencies that may arise, with the greatest possible exercise of all that modern medical, surgical, and especially hygienic, science teaches.

A MEMOIR OF DR. JAMES JACKSON, with Sketches of his Father, Hon. Jonathan Jackson, and his brothers Robert, Henry, Charles and Patrick Tracy Jackson, and Some Account of Their Ancestry by T. T. Putnam, M.D. Cloth. Pp. 456. Price, \$2.50 net. New York: Houghton Mifflin & Co., 1905.

This will be considered a rather belated memoir when it is realized that forty years have elapsed since Dr. Jackson's death, and especially since he had attained to an advanced old age when he died. But, while belated, it is none the less welcome, if for no other reason than that it is another addition to the literature that enlightens us regarding medical affairs at the time when American medicine was in the forming.

Dr. Jackson was one of the most influential of the physicians in and around Boston during the first quarter of the nineteenth century. While he wrote but little that has come down to us, or that left an impression on medical literature, he was one of those who influenced the affairs of his time and who molded professional and public opinion, not only for the then present, but for the future. He returned from his European studies in 1800, just at the time that vaccination was being introduced, and to him belongs the credit of being the first physician in this country to have absolute confidence in the Jenner theory. He had obtained this confidence from his experiences in the small pox hospitals of London under Dr. Woodville, the enthusiastic follower of Jenner. Dr. Jackson was a contemporary with Dr. John Collins Warren, and the two were co-workers in many schemes for the betterment of the profession and for improved hygienic conditions of the public. These two were the leaders in the reorganization of the Massachusetts State Medical Society, Dr. Warren being the first president of the new society, and the Massachusetts General Hospital owes its inception to Drs. Warren and Jackson, the former having the credit for conceiving the idea. Thus in the memoirs before us we are carried back to those good old times that we all like to read about, to the time when character and integrity and hard work were the ideals. Nearly half of the volume is devoted to a history of Jackson's ancestors, and these and their times are described in an interesting, if not a charming, manner.

To those who love to read of men who have done things, and of the early history of our country, especially as it relates to medicine, these memoirs will be found both satisfactory and pleasing.

THE ART OF COMPOUNDING. A Text book for Students and a Reference Book for Pharmacists at the Prescription Counter. By Wilbur L. Scoville, Ph.D., formerly Professor of Theory and Practice of Pharmacy in the Massachusetts College of Pharmacy. Third edition. Revised and enlarged. Cloth. Pp. 337. Price, \$2.50 net. Philadelphia: P. Blakiston's Son & Co., 1904.

Now that the physician is beginning especially to concern himself as to the character and composition of medicines, a book should be welcome which affords information as to how best to prepare many of the pharmaceutical mixtures extemporaneously. While the work is based on the eighth revision of the U. S. Pharmacopeia and the official preparations are used as examples, most unofficial related classes are included with similar illustrations, thus, for instance, under "Miscellaneous External Preparations" are described cataplasms, fomentations, plaster mull, plasma, escharotics, pastes, paints, collodion, dry ing liniments, glycerogelatin, pencils or crayons, salve pencils, spongiopiline and moxa. Specimen combinations are here given and they afford the physician an endless variety of prescription. There is, besides, much valuable information on writing prescriptions, incompatibilities, etc. In plasters, however, the author describes the commercial manufacturer of rubber plasters without referring to the far more valuable therapeutically official plasters made of the adhesive plaster of the new Pharmacopeia, which any physician may use to advantage.

NERVOUS AND MENTAL DISEASES. By Archibald Church, M.D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago, and Frederick Peterson, M.D., President of the State Commission in Lunacy, New York. Fifth edition revised and enlarged. Octavo. 937 pages. 341 illustrations. Cloth, \$5.00 net. Philadelphia: W. B. Saunders Co., 1905.

The preface states that practically no very material changes have been made in the arrangement or descriptive text, though the work as a whole has been carefully revised and many brief

interpolations made to improve the subject matter. This is more strictly true of the section on nervous diseases. The changes are more notable in Dr Peterson's section on mental disorders. In the former editions the old style classification of the classic types of mania, melancholia, dementia, etc., was retained almost intact, notwithstanding the fact that the ideas of the Heidelberg school had already begun to tinge the ideas of many American psychiatrists. In this edition Dr Peterson has included Kraepelin's species of "manic-depressive" in sanity and "dementia præcox," though not according them exactly the same limits and extension as is done by Kraepelin and his followers. He also retains the old forms of mania and melancholia, in which, especially as regards the latter, he will probably find many practical alienists in accordance with him. Dr Adolf Meyer's elaborate essay on the recent problems of psychiatry is retained in this edition and furnishes a valuable exposé of the modern European views. The book as a whole will deservedly retain the public favor with which the former editions were received.

RADIOTHERAPY IN SKIN DISEASE. By J. Belot, with a Preface by L. Brocq. Translated by W. D. Butcher, M.R.C.S. Authorized translation from the Second French Edition with thirteen plates and twenty-eight illustrations. Cloth. Pp. 403. New York: Heiman Company, 1905.

The first part of this book is a historical review of radio therapy, production of α rays, including sources of electricity, the various currents, tubes, etc., methods of exact measurement, and the theory of the Roentgen rays. Part II deals chiefly with the biologic effects of rays and the method of application. Part III takes up the treatment of various diseases. From the descriptions given, the apparatus and technic seem rather complicated. The quantities of rays used are expressed according to the units of the Holzknecht chromoradiometer. The work will be of more value to specialists in electrotherapeutics and dermatology than to the general practitioner.

AROUND THE WORLD VIA INDIA. A Medical Tour. By N. Senn, Ph.D. L.L.D. Cloth. Pp. 347. Chicago: American Medical Association Press, 1905.

This book consists of a series of most interesting letters, written by Dr Senn while traveling, which first appeared serially in *THE JOURNAL*. Beginning with Hawaii, Dr Senn describes the manner and customs of the peoples, with diseases peculiar to the various countries visited. He writes instructively of the leper colony in Hawaii, giving an eloquent tribute to the work of Father Damien, and describes the condition of medical education in Australia and in India. He speaks highly of the work done by the men of the Indian Medical Service, especially in regard to research work in cholera and plague serums and antivenin. This book is well illustrated, showing characteristic people, buildings and scenery.

DEVELOPMENTAL PATHOLOGY. By E. S. Talbot, M.S. D.D.S. L.L.D. First Edition. Cloth. 205 illustrations. Chicago: Published by the Author, 1905.

Dr Talbot has gathered in this volume articles which he has written on various phases of the subject treated and which he has published from time to time in various medical and dental journals. The contents of the work indicate the extent of the author's research, not only in stomatology, but over a wide field of medical subjects, and embody the results of thirty years' labor. The subject of evolution was little understood thirty years ago, and these various articles prove the accord with that theory shown in most of the deformities of the human body.

LECTURES ON AUTOINTOXICATION IN DISEASE, or Self Poisoning of the Individual. By Ch. Bouchard. Translated with a Preface and New Chapters Added by T. Oliver, M.A. M.D. F.R.C.P. Professor of Physiology, University of Durham. Second Edition. Cloth. Pp. 342. Price \$2.00 net. Philadelphia: F. A. Davis Co., 1905.

This book is about twice as large as the original volume by Bouchard which bore the same title. It has been rewritten by Thomas Oliver who made the original translations. The new matter has been interpolated and added to the old. In its present form it contains the numerous additions which have been made to medicine in the field which it covers.

ATONIA GASTRICA (Abdominal Relaxation). By A. Rose, M.D. and R. C. Kemp, M.D. Cloth. 1 p. 20. Price \$1.00 net. New York: Funk & Wagnalls Co., 1905.

This work treats an important subject in a superficial way.

It would be of greater use to the general practitioner were there fewer digressions into the field of etymology. A large part of the book is devoted to reports of cases in which the patients were treated by a plaster bandage devised by one of the authors. Methods, new and old, of diagnosing this condition are briefly related.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Veronal.

Veronal as a hypnotic has come into use more and more within the past year or two, especially in the treatment of insomnia due to functional nervous disturbances, such as neurasthenia, hysteria, etc. It is best given in doses of from 5 to 7½ grains (30-50) each, and prescribed in the powder form. The sleep that it induces undoubtedly more nearly approaches the normal sleep than that produced by other hypnotics of the same class. Its advantages, therefore, lie in the fact that the usual drowsy feeling which the patient complains of during the day following the taking of bromids or sulphonal, are usually absent. In the experience of reliable authorities, patients state that the sleep thus produced is almost a natural sleep, and a refreshed feeling is observed after the patient awakens. With this preparation, as with all other hypnotics, however, there are a number of cases on record of poisonous effects produced by taking this preparation in too large doses. In *THE JOURNAL*, February 17, page 550, it is noted that poisoning from veronal took place after the ingestion of 45 grains (68 grains). The same symptoms of nausea, vomiting, headache and somnolence have been observed after the self administration of 75 grains (500) of chloralamid by a patient who was endeavoring to secure sleep after a prolonged debauch. The preparation was the elixir of chloralamid, taken in teaspoonful doses every few minutes, which was probably because of the presence of the alcohol in the mixture.

The "Practical Medicine Series" recommends veronal in the treatment of insomnia due to epilepsy, general paralysis, neurasthenia and hysteria. It is recommended that it be given in warm water on retiring. Its action is rapid, and within half an hour a quiet, natural sleep, without disagreeable prodromal sensations, is experienced. The duration of sleep from administration of from 5 to 7½ grains (30-50) of this preparation was six hours. The patients, according to this authority, do not establish a toleration for the drug or become accustomed to it. The circulation and the digestive systems are not disturbed, and the secretions of the body show no modification. The precaution, however, is given of observing the state of the liver and kidneys before its administration. Spielmeier, in the same periodical, regards veronal as a hypnotic of value, given in gram doses (grains 15) at bedtime. Other authorities find its taste less disagreeable than that of chloral, paraldehyde or dormiol, and its action superior, at the same time, it does not show the cumulative action of sulphonal and trional. Patrick endorses this preparation as a very commendable one, and has used it a great number of cases, and has not observed an instance of decidedly unpleasant effects. He regards the dose of ½ gram (grains 7½) as sufficient in mild cases, and even 5 grains will be effective in such cases. He regards 15 grains as a dose which may be given without hesitation when it is deemed necessary, although he states that some somnolence and slight dizziness may be noted the following day. He quotes one case in which 30 grains were given by mistake, and the only ill effect was very prolonged slumber, followed by some dizziness and uncertainty on the feet.

Dr R. Brower usually prescribes it in doses of 5 grains (.30) each, and in preference to increasing the dose of veronal he

combines with it codium in doses of from 1/4 to 1/3 grain (015 02) and he prefers this preparation in the ordinary cases of insomnia to the bromids or even to chloralamid, which he formerly used in preference to the other hypnotics, on account of the fact that it had no depressing effects on the heart or circulation

Gastric Ulcer

In the treatment of gastric ulcer William Van V. Hayes, in the *New York State Journal of Medicine*, states that when there are repeated severe hemorrhages with cicatricial obstruction or when there is a carcinoma ingrafted on the ulcer, that a competent surgeon should be consulted. If the case is a medical one he recommends rest in bed usually for four or five weeks allowing a week or two if possible, after the abnormal signs and symptoms are controlled. During the first few weeks of rest in bed the patient should not be allowed to sit up in bed for any purpose. The alimentation should be by the bowel especially in the more severe cases. It is necessary to vary the food according to the needs of each particular case. In other cases milk may be given in quantities of from one half to one glass every two hours. It should not be very hot nor too cold and should be combined with two ounces of Vichy or lime water. It milk is not well tolerated the whites of two eggs beaten up with water and two ounces of beef juice may be given alternately every two hours. This should be continued for a period of about ten days until the symptoms are under control when he recommends strained gruels, the fine wheat cereals or chicken broths soft boiled or lightly poached eggs and bread a day or two old. After a few weeks the patient may be allowed a general diet. Rectal feeding should be employed for one or two weeks in the hemorrhagic and severe cases. Cleansing enemata should be given one hour before the nutrient enemata are administered. The latter should be given through a long tube with side openings and during its administration the patient's hips should be raised on a pillow. Pressure should be made against the rectum so as to retain the enema for twenty minutes and the patient should be instructed to maintain the same position for from half to one hour. He recommends the following combination for nutrient enemata:

Milk, peptonized	5 ounces
Yell. of egg	1
Claret	1 tablespoonful
Prepared cereal food	1 tablespoonful
Salt	15 grains
Or Milk	1 ounce
Water	1 ounce
Eggs	2
Salt	15 grains

The milk and egg in this preparation may be predigested with pepsin 5 grains, and sodium bicarbonate, 15 grains.

Place the receptacle containing this mixture in a wooden bucket containing water as hot as can be borne by the hand, and allow it to remain for one hour. One tablespoonful of arrowroot made into a paste may be added before predigestion.

Another combination similar to the following is recommended as an enema:

Liq. peptones	1 ounce
Water or peptonized milk	5 ounces
Salt	15 grains

If the bowel is irritable, from 3 to 5 minims of the tincture of opium may be added to each enema. In order to control bleeding from the stomach, if present, the nitrate of silver may be given in one fourth grain doses in half an ounce of water, every morning when the patient awakes for a period of about ten days, after which bismuth subnitrate may be given in 60 grain doses at bedtime, and continued, if necessary. To counteract the hyperacidity, which is irritating to the ulcer, the following combination is recommended by the author:

R Bismuthi subcarbonatis	grs iii	20
Sodii bicarbonatis		
Magnesium bicarbonatis, ññ	gr v	30

Iat pulvis No 1 Sig To be given fifteen minutes after food

In cases of severe hemorrhage, the essential treatment is absolute quiet, hypodermic injection of morphin sulphate, gr 1/4, combined with atropin sulphate, gr 1/150, and adrenalin chlorid (1,000), 30 drops, diluted in water and given by the mouth. An ice bag or cold compress should be applied to the epigastrium. If necessary, one pint of warm normal saline solution may be given by the rectum or hypodermically. Nutrient enemata may be resorted to after twenty four hours.

For the resulting anemia in these cases he prefers the liquid preparation of iron, that is, the tincture, in from 10 to 15 drop doses (65 100), in albumin water, and taken through a tube three times a day.

Formaldehyd in Internal Diseases

I Zwilling, in an abstract in the *British Medical Journal*, recommends the administration of formaldehyd internally in cases of sore throat, catarrh of the bladder, erysipelas, scarlet fever and diphtheria. In almost every case favorable results were obtained. He recommends that it be given in the form of mint tablets each of which contains 1 centigram of formaldehyd. In such a way the formaldehyd is set free in the mouth as the tablet dissolves, and exerts a direct disinfectant and bactericidal action, consequently it is well to instruct the patient to keep the tablets in the mouth as long as possible. He administered these tablets once every hour until five tablets were taken, when the interval between the doses was increased to two hours until the temperature became normal, and then one was given every three hours. This was the dose given to children of ages varying from 5 to 10 years. He speaks of administering it in ten cases of diphtheria as a substitute for the local treatment by disinfectant gargles, and in some of the milder cases antitoxin was not administered. In all these cases improvement was rapid and diphtheritic paralysis did not occur in any. He regards it as of value in the treatment of exstis, which may be due to gonorrheal origin or spinal conditions.

Medicolegal

Osteopaths Are Practicers of Medicine

The Supreme Court of Alabama says that the case of Ligon vs State was tried on an agreed state of facts similar in all essential respects to the case of Bragg vs State, 134 Ala., 165, in which it was held, June 28, 1902, that the practice of osteopathy was the practice of medicine within the meaning of the code provisions of that state. It says that the object of the appeal in this (Ligon) case was to have the Bragg case overruled. Counsel said, in brief "It is respectfully submitted that on review of the point involved this court should not affirm the correctness of that decision, but should depart from it." The court's answer is that the decision in that (Bragg) case was unanimous. It covered all of the questions here involved, after careful and mature consideration. The court has re-examined it, and on reason and the authorities cited it has been unable to conclude that it is wrong. It should not therefore, be overruled. The court can add nothing new in this decision to what was there said. To attempt it would be to go over the same grounds with inability to shed new light on them.

Liability of Wife for Medical Care of Husband

The Supreme Court of Washington says, in the case of Russell vs Graumann, an action brought by a physician, that a statute of that state provides "The expenses of the family and the education of the children are chargeable on the property of both husband and wife, or either of them, and in relation thereto they may be sued jointly or separately." That ordinary medical aid and advice for the wife create family expenses has been repeatedly held. The husband is a part of the ordinary family, and under a statute providing in general terms for liability for "expenses of the family," as does the statute above quoted the court sees no reason why medical and hospital services rendered to a husband are not as fully comprehended in the statute as are those rendered to a wife. Assuming that in this case the wife may not at any time have been with her husband in

the city of Spokane, where he had resided for about three years pursuing his occupation as a painter, it did not follow from that fact alone that the family relationship had in a legal sense been severed. It is not necessary that the husband and wife shall at all times reside together under the same roof in order that the legal status of the family may be preserved. It is a matter of common knowledge that many husbands in their struggles for a livelihood are often required to be far from home and for long periods of time, and that such enforced absences are in behalf of the family, in order that the comforts of life may be provided for them. Such absence may be a strong evidence of affection and regard for the family, rather than otherwise. It will not do to say that in such cases the family status is destroyed by somewhat continued absence of the husband.

Presumption of Death from Circumstantial Evidence

The Supreme Court of Kansas says, in *Modern Woodmen of America vs Gerdorn*, that it is true that death may be proved by circumstantial evidence, and that absence for a considerable period of time is not indispensable in order to generate a satisfying conviction of the fact. But in all such instances the death of the absent party must fairly be demonstrated by the circumstances of the disappearance. If, for example, in connection with other facts showing a want of motive for absence, it should appear that the missing person was on a vessel which foundered or a train which was wrecked, or engaged in some hazardous enterprise, or met with an accident which might be expected to result fatally, or was exposed to perils incompatible with his age or the state of his health, or was afflicted with a fatal disease, or was mentally infirm, or was suicidally inclined, belief in the fact of death might be forced on the mind very soon after the disappearance. And in some cases the age, health, disposition, moral character, domestic relations, social rank and financial condition of one who suddenly disappears may themselves, without the aid of other circumstances, stifle all doubt that the person is dead. Such, at least, is the view of most of the courts of last resort. But in all the cases enumerated, lapse of time is in a measure a subsidiary matter. There must be a sufficient opportunity for investigation and search, and after the expiration of a period ample for those purposes further stretches of duration without tidings may confirm the inference of death. But the strength of the induction lies in the cogency of the circumstances of the disappearance and not in the fact of absence long protracted. The social aspects of our civilization have been almost revolutionized since the presumption based on the fact of seven years' unexplained absence was adopted. The presumption of death from absence can not have the strong probability of fact as its basis which formerly supported it, and persons who, for their own profit, assume the burden of establishing in courts of justice that the death of an individual has occurred have little excuse for urging their own isolated ignorance of his fate or his whereabouts as the principal item of their proof.

Power of Claim Agent to Employ Physician.

The Kansas City Court of Appeals affirms a judgment in favor of a physician, the plaintiff in the case of *Reynolds vs C & Q R Co*. It says that a passenger named Coffey was injured May 20, 1902, in a wreck near Albany, Mo. The agent of the station caused him to be moved to a hotel in said town and sent for physicians to attend his injuries. About five days thereafter Coffey sent for the plaintiff, his family physician, to consult with the physicians already in attendance in reference to his treatment and removal to his home in King City. Previously, however, a stock agent of the railroad company had been to see Coffey and had consulted with the physicians in attendance, and had joined in the request of Coffey for the plaintiff for said consultation. The plaintiff treated Coffey for his injuries for about thirty days while he was at Albany, when he was removed to his home in King City after which time he was his regular attending physician. On the 8th day of July one Wood who claimed to have authority to adjust claims against the railroad company for personal injuries, saw Coffey at King City and made inquiries as to the kind of care he was receiving and the treatment that the plaintiff was administering to him. Wood saw Coffey more than once after he was moved to King City at one of which times, when the question

came up who was to pay the plaintiff for his services, he said "We pay all bills." At one time the plaintiff had a conversation with the station agent of the company at King City, in which he said to the agent that he was not satisfied with the progress made by Coffey and that he wished a consultation in the case. The agent referred him to Wood, and Wood came to King City. Coffey compromised his claim against the railroad company for \$2,500, but in so doing he did not include the medical bill of the plaintiff. At the time of the compromise the plaintiff was summoned to St. Joseph, where the compromise was consummated. He was sent for to confer with the company's general physician and surgeon and other physicians in reference to Coffey's injuries. Wood, for his services and expenses in that matter, as agent of the company, allowed and paid them. But in this case for services, as above stated, which resulted in a verdict in the plaintiff's favor for \$478, the railroad company contended that there was no evidence to show that Wood or any one else had authority to bind it for the payment of the plaintiff for his services so rendered. The court, however, says that the evidence here tended to show that said agent was acting within the scope of his authority when he employed and agreed to pay the plaintiff for his attendance on Coffey. The acts of said agent in visiting the injured, employing physicians and consulting with them in reference to their condition and treatment, taken in connection with the acts of the company in paying for the services of such physicians, was proper evidence to go to the jury, and was sufficient to support the finding that said Wood, when he employed and agreed to pay the plaintiff for his attendance on Coffey, was acting within the scope of his authority. The said Wood appeared to have been put forward as a general agent in looking after such persons, and was placed in a position where others were justified in the belief that his powers were general in that respect, and whatever restrictions there may have been imposed on said agent as between him and the railroad company could have no effect on the rights of third persons, who had no knowledge of the restrictions or limitations on his apparent authority. The court is of the opinion that, as agent of the railroad company to settle claims against it for personal injuries, he was within the scope of his authority in agreeing to pay the plaintiff for his services as physician for Coffey, and, as it was necessarily a part of the latter's claim for damages, it was immaterial whether this agreement to pay was made with the plaintiff or with Coffey, and it was also immaterial whether he employed the plaintiff to render the services in the first place.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Medicine, Philadelphia, Pa

February 17

- 1 *Puerperal Infection. E McDonald, New York
- 2 *Congenital Malformations of the Heart. A. G. Ellis, Philadelphia.
- 3 *Cleansing of Milk Vessels. Relative Value of Washing Powders. A. H. Stewart, Philadelphia.
- 4 *Facts About Dating. J. W. Achorn, Boston.
- 5 Typhoid Fever, How Can It Be Eliminated? J. L. Heffron, Syracuse, N. Y.
- 6 *Abscess of Antrum Causing Symptoms of Acute Articular Rheumatism. K. K. Wheelock, Ft. Wayne, Ind.

1 Puerperal Infection.—McDonald reports six cases of which a careful study was made. She found that while streptococcus infection is usually the most common and severe type of infection, other organisms, which usually produce clinically mild symptoms, may produce a severe type of this disease with a fatal termination. She urges that the term puerperal infection should be broadened to include infection elsewhere than in the uterus, and that the location and nature of such lesions should be recognized before any operative measures are undertaken. The presence of pathogenic microorganisms in the genital canal is by no means sufficient evidence on which to base a diagnosis of puerperal infection.

2 Congenital Malformation of Heart.—Among 3,875 autopsies performed at the Philadelphia Hospital during the past

serums have been presented to the profession, and many theories concerning the solution of the problem of infectious diseases have led astray even the elect. Many of these claims, Marvin says, are an abomination to science and a menace to educational progress. More recently the study of chemical products has been assiduously pursued though unfortunately there has appeared to be some antagonism between the biologist, chemist and the clinician. Much of our literature has been burdened with laboratory jargon meaning anything or nothing, according to the reader's opinion. The manufacturing druggist and the dealer in proprietary drugs pander to our inordinate gullibility and by the use of the name and garb of easily coined pseudo science lead many willing captives by the witchery of their eloquence and make some physicians facile fabricators of fiction and others quasi endorsers of crass misrepresentations of chemistry and science. If we trust "the true seeming lie" all that is necessary to compel Nature, however crippled to resume labor and build up tissue is to administer any one of a number of predigested, peptonized, malted or otherwise false foods or pretentious tissue builders claiming to be competent therapeutic foods without the intervention of digestive effort or some chemical compound so nearly protoplasmic as to build tissue itself without Nature's co-operation or consent. The trend of medical research Marvin believes is along the line of pathology, but the clinician should follow closely in its wake. Care and exactness in diagnosis are of prime and fundamental importance. A diagnosis may be etiologic, clinical or pathologic—in other words, an opinion based on the specific cause of disease in an individual case. Etiology and pathology have been unduly magnified and therapeutics is in danger of being forgotten. It has been claimed, but not corroborated, he says, that the various serums represent an era of specific therapeutics, but we must still use some of the empiric remedies. The claim is made that by the use of some favorite intestinal antiseptic—the golden calf of the manufacturing pharmacist—typhoid fever may be aborted or its course shortened. If physicians would carry their pathology with their therapeutics to the bedside, and realize that typhoid fever is more often a general bacteremia than an intestinal disorder, and that in 80 per cent of the cases the specific bacillus can be found in the blood, they would realize the absurdity of the claim that any of the so-called intestinal septicemics can exert any appreciable influence over the twenty or feet of intestine and the entire blood stream. Because serum is hygroscopic it is but the counterfeit of science to claim that a paste of glycerin and fine clay applied hot to the chest will have any effect on a pneumonia, no matter how learnedly the manufacturing chemist may talk about osmosis. The injection of some fluid of unknown composition in tuberculosis smacks of quackery. A tyro in chemistry would laugh to scorn the claims about nascent chlorine and ozone. Water—the cheapest and commonest thing in Nature—is bottled, and the price of wine is paid for it, and we imagine it cures Bright's disease and diabetes. These are but examples of therapeutic optimism which needs to be shunned as much as therapeutic nihilism. In the treatment of disease the tendency is to over-treatment and meddlesomeness. In a disease that is self-limited and running generally a short course, the skill of the physician is taxed, and while prompt and energetic treatment may be necessary to save life, useless drugging and agencies applied internally, over-feeding and over-stimulation and over-handling or over-nursing are fraught with great danger. Fresh air, digestible food in small amounts, sleep—tired Nature's sweet restorer—and the treatment of symptoms as they arise are the beacon-lights in the management of this disease. The physician is the most misunderstood of men. Medicine is an art, a profession, and can not be judged by the standards of trade or business. If Nature be but evolution, mere cause and effect, she neither kills nor cures, she can be guided or misguided by the physician. In matters of life and health the physician utilizes or combats the forces of Nature. His best energies are always directed toward inhibiting the various conditions from which he gains his livelihood. He has no patents or trade secrets, no proprietorship in anything his colleague may not use for the benefit of humanity. He strives

to prevent disease, to perfect measures to alleviate suffering, and through his societies, the medical press and libraries open to the public, he teaches the layman how best to dispense with the services of the physician. The physician should be a public servant as well as the servant of the individual. He is the apostle of health and healthfulness. He is the conservator of peace and happiness of society, the trustee of the health of the community.

26—See abstract in THE JOURNAL, Nov. 4, 1905, page 1434

Annals of Surgery, Philadelphia January

- 29 Preservation of the Nerve Supply to the Brow, in the Operative Approach to the Gasserian Ganglion H. Cushing, Baltimore
- 30 *Operative Treatment of Cleft Palate C. H. Peck, New York
- 31 Acute Edema of the Lungs Secondary to Ether Narcosis A. C. Pedersen, New York
- 32 Excision of Portions of the Chest Wall for Malignant Tumors I. Hixford, San Francisco, Cal.
- 33 Non-parasitic Cysts of the Spleen C. A. Powers, Denver
- 34 Perforation of the Gall Bladder A. MacLaren, St. Paul, Minn.
- 35 *Value and Place of Duodenoduodenostomy in Gallstone Surgery J. C. Hancock, Dubuque, Iowa
- 36 Constriction of the Duodenum Below the Entrance of the Common Duct and Its Relation to Disease A. J. Ochsner, Chicago
- 37 *Anomaly of the Duodenum Resulting in Death After Gastroenterostomy J. G. Mumford, Boston
- 38 Resection of Intestine Followed by End to End Anastomosis F. Elliot, Jr., New York
- 39 *Transverse Incision for the Removal of the Appendix G. G. Davis, Philadelphia
- 40 Radical Cure of Direct Inguinal Hernia Id.
- 41 *Radical Cure of Severe Femoral and Inguinal Hernia J. H. Nicoll, Glasgow
- 42 *Radical Operation for Inguinal Hernia J. R. Eastman, Indianapolis, Ind.

30 Operative Treatment of Cleft Palate—Peck calls attention to certain points in technique which aid in securing prompt surgical closure of the cleft with a minimum amount of damage to the muscles of the soft palate. He believes that children of 6 or 7 years of age are the most favorable subjects for operation from the purely surgical standpoint. The very serious disadvantage is that habits of speech are already formed and the defect in pronunciation is more difficult to overcome. Peck invariably uses the hanging head, Rose position, intermittent ether anesthesia with an open cone, and the Whitehead gag. He never resorts to preliminary tracheotomy and does not believe that it should ever be necessary. The special instruments used are the Whitehead mouth gag, a very slender knife for transfixing the edge of the flap, paring and splitting the edge of the uvula, a long, slender pair of mouse-tooth forceps, a strong, straight scalpel for making the lateral incisions, a thin, blunt periosteal elevator, slightly curved on the flat, a sharply curved Deschamps' handle needle for passing the heavier sutures, and his own special needle holder and needles for the fine sutures. The edges are pared by transfixing the edge of the soft palate with a very fine, sharp knife and cutting first forward to the anterior angle of the cleft, then backward, bringing the knife out at the base of the uvula, the strip removed should be as narrow as possible to avoid waste of tissue, but the full thickness of the flap. The mucous membrane of the uvula is then split on its inner border, i. e., facing the cleft, it easily separates to give a sufficient raw surface and all of the tissue of the rudimentary half of the uvula is saved. The denudation is repeated on the opposite side of the cleft. The lateral incisions are now made, commencing opposite the last molar tooth close to the border of the gums and carried forward to a point opposite the anterior extremity of the cleft, but taking great care to leave a broad anterior pedicle to the flap for nutrition. This incision falls external to the posterior palatine foramen and the main trunk of the artery as it runs forward, the branches are first divided, the main trunk being usually torn by the periosteal elevator. In clefts running forward through the alveolar process Peck prefers to leave the extreme anterior end of the cleft for later closure rather than endanger the nutrition of the flaps by prolongation of the lateral incision and narrowing of the pedicle. The curved periosteal elevator is then inserted in the lateral incision, and hugging the bone, is forced carefully through into the cleft, by lateral sweeps

the entire flap is quickly separated, including the mucoperiosteum at the anterior angle of incomplete clefts. Posteriorly the instrument is strongly carried outward and backward along the posterior margin of the hard palate, and to a great extent detaches the palatine aponeurosis and the mucous membrane on the nasal aspect of the velum from the bone. In the majority of cases hemorrhage soon ceases to be troublesome after this blunt separation, posterior branches of the descending palatine artery remain uninjured for nutrition of the posterior portion of the flap, even after very free separation with the raspator. The inner edge of the flap is then seized with mouse tooth forceps at the base of the soft palate, i. e., where the muscular pull concentrates, a thin, straight bistoury is inserted through the posterior part of the lateral incision, and cutting outward and backward as traction on the flap is made toward the median line, the detachment of nasal mucous membrane and palatine aponeurosis from the posterior border of the hard palate is completed, and by a careful saving motion enough of the mucous membrane of the nasopharynx is divided to allow the edges of the flap to fall to the median line without tension. Few, if any, of the fibers of the bellies of the levator or tensor palati are cut. The palatine aponeurosis which receives the insertions of the tensor and levator is completely detached from the posterior border of the hard palate as far outward as the base of the hamular process, together with the mucous membrane on the nasal aspect of the soft palate, allowing the velum to drop downward. This aponeurosis with its muscular insertions remains in the flaps. In cases of wide cleft, tension on the flaps is still caused by the shortened salpingopalatine fold of mucous membrane running upward and backward on the lateral wall of the pharynx along the belly of the levator palati. Peck says that free division of this fold by gently tearing with the finger or snapping with blunt curved scissors as traction is made on the flap downward and inward to make it prominent, is easily accomplished without damaging the muscles, and effectually relieves tension. All this can be done without unduly narrowing the bridge of tissue behind, or endangering the nutrition of the flap. By this time the hemorrhage has nearly ceased and the flaps are ready for suture. Beginning close to the base of the uvula, sutures of iron dyed silk, No. 6, are passed on the Deschamps's handle needle through the entire thickness of both flaps at a sufficient distance from the edge to guard against cutting through, these are left untied until the last is passed, four or five being usually sufficient, placed from one fourth to one third of an inch apart. They are then tied in order, with a surgeon's knot, usually beginning with the posterior stitch, the ends being left long for the time. Intermediate stitches of iron dyed silk No. 3 are then placed between each of the heavier stitches and two or three in the uvula itself, the last at its tip or even on the nasal aspect. They are passed on the very fine special needles with the eye in the point, carried on the special needle holder, they include only part of the thickness of the flap, are closer to the edge are tied immediately and insure accurate apposition of the edges, such as is aimed at in all fine plastic work. Five to seven of these are used, making in all ten or twelve sutures. The long ends of the heavier sutures are used for traction and steadying the flaps during the passage of the fine sutures, especially in bringing the uvula forward. Each, as it has served its purpose, is cut short. In the treatment of the lateral incisions Peck uses a device suggested by C. H. Mayo, a piece of white tape is passed around both flaps through the lateral incisions, drawn just tight enough to approximate the flaps slightly and guard against tension, and secured by a silk ligature. The ends are cut short and slip around to the nasal surface of the flaps. This is left in place seven days and serves for drainage as well as for the relief of tension.

35 Value of Duodenocholedochotomy.—Hancock states that in favor of duodenocholedochotomy for gallstones in the lower end of the common duct are (a) the avoidance of drainage some cases in which one would not otherwise wish to sew up the wound in the duct and close the abdomen, (b) the greater ease in sewing the duodenal than the duct incision by virtue of size and proximity of the former, (c) uniformly kind

healing of intestinal wounds, (d) easy and natural access to common duct, (e) ease and benefit of dilatation of papillary orifice in insuring better drainage of bile and detritus, (f) duct may be safely incised for half an inch in extracting stone or in enlarging the orifice for drainage. Against the procedure has been raised the common prejudice against opening the gut in general, the fear of fistula which occurred in but two out of 62 cases, and the dread of infection which, as indicated above, has been vastly overrated in regard to the upper half of the intestines. In neoplasm of the papilla this route is clearly indicated for diagnosis and treatment when the growth is amenable to local treatment and the gall bladder can not be used for anastomosis or drainage. In total stenosis of the papillary orifice, whether from neoplasm or trauma of stones, a choledochoduodenostomy could be done with the incision employed in duodenocholedochotomy, where the anastomosis could be made low down in the common duct. In pancreatic stone a duodeno-pancreo lithotomy is an established procedure, and for good anatomic reason is the method of election.

37 Anomaly of Duodenum.—Mumford cites the case of a young man who had suffered severely with gastric symptoms for five years. It was obvious that he had a greatly dilated stomach. An immovable mass about the size of a pigeon's egg could be felt in what was thought to be the pyloric region. It was assumed that this mass was of inflammatory origin and a drainage operation was advised. On opening the abdomen Mumford found that a large part of the pyloric portion of the stomach was greatly thickened, and was held up to the liver by strong and dense adhesions. On turning up the omentum, colon and stomach and searching for the jejunum, Mumford found that that portion of the gut did not spring from the ligament of Treitz on the left crus of the diaphragm, but from the right crus. In other words, the fixed duodenum ended on the right of the spinal column. Little was thought of this anomaly at the time. A short loop posterior gastroenterostomy was done, the opening in the stomach being made as near the pylorus as possible, and the opening in the jejunum about three inches from the ligament of Treitz. All went well until the fifth day after the operation, when the patient complained of some epigastric uneasiness. Later on the same day he underwent a sudden and violent paroxysm of severe abdominal pain, associated with profound and alarming collapse. Death ensued on the sixth day. The autopsy disclosed the abdominal cavity flooded with gastric contents. A large rent was found in the fundus of the stomach.

39 Transverse Incision in Appendectomy.—Davis employs two incisions, each being designed to avoid wounding arteries, and to make the appendix easily accessible. For easy cases the incision is made directly transverse, one and a half inches long. Its center is to be on the semilunar line on a level with the anterior superior spine. The aponeurosis of the external oblique is divided in the line of the skin incision, but obliquely to the direction of its fibers. The fibers of the internal oblique and transversalis muscles are parted—not cut—in the same line as the structures above. The peritoneum is then opened and the incision carried inward through first the anterior layer of sheath of the rectus. A blunt retractor three quarters of an inch wide is then inserted and the muscle drawn toward the median line. This exposes the transversalis fascia and peritoneum posteriorly which are then also divided. Thus is obtained a triangular opening with its base of three quarters of an inch and two sides of about an inch long, which is ample for simple cases. If the case is a difficult one, the outer end of the incision is prolonged to the anterior spine or even above and inwardly through the sheath of the rectus to within an inch of the median line. This will give an opening from four to five inches long, according to the size of the patient, sufficiently large to insert the hand if necessary, and through which the appendix can be extracted under almost all circumstances. In cases in which drainage is necessary, the drain is brought out at the angle of the wound and lies close to the bony anterior superior spine and passes through the thick muscular mass of the internal oblique and transversalis, all of which insures against the formation of a hernia at that point. The inner portion of the wound is protected absolutely

against hernia by the rectus muscle, and to its outside there are the thick internal oblique and transversalis muscles beneath and above them the aponeurosis of the external oblique. Davis says that the division of the external oblique aponeurosis obliquely instead of parallel to the direction of its fibers may be urged as an objection, but this is more than compensated for by the better access which is afforded. No hernias have come under his observation even in suppurative cases.

41 Radical Cure of Severe Femoral and Inguinal Hernia.—The method of operating described by Nicoll is applicable to both femoral and inguinal hernia. Its main features are (a) the employment of the sac to form an intra abdominal buttress over the internal aspect of the hernial opening or ring, (b) the use of the pubic ramus as a point d'appui in the process of closure of the hernial canal and (c) the additional security of closure obtained by the superposition on the bone sutures of a plane of fascial sutures. The technique of the operation is as follows. Obliteration of the sac also of the peritoneal depression over the abdominal aspect of the ring and the substitution of a buttress over the internal aspect of the ring. The sac is exposed and cleared from surrounding tissues (the skin incision may be vertical or transverse). It is then opened longitudinally in its middle line, cleared of its contents, and separated from parts surrounding its neck, including the transversalis and the iliac fascia, for one inch round the abdominal aspect of the ring. Next, the sac is bisected longitudinally from fundus to neck and an aperture is made in one half near the neck, and the halves are interlocked by putting the other through the aperture. In certain cases it lies better if previously twisted one half turn on its longitudinal axis. Next, the whole sac is reduced through the femoral ring into the extraperitoneal space previously cleared for it by detaching its neck from the abdominal aspect of the ring. The sac thus lies bunched up within the abdomen, between the peritoneum and the transversalis and iliac fascia over the internal aperture of the femoral canal. When the sac is unnecessarily large part of it may be cut away before reducing it through the canal. An incision is carried (bone deep) from the femoral vein along the pubic ramus to the region of the pubic spine. This divides the pubic portion of the fascia lata, the origin of the pectineus, and the periosteum. Its length depends on the extent to which the femoral vein has been displaced outward by the presence of the hernia. The periosteum is then detached to a limited extent and retracted. The bone is drilled near its upper edge in two places, from one half inch to one inch apart (one drillhole may be made to suffice). Through one of the apertures a loop of stout catgut or other absorbable ligature is passed, either by threading it in the eye of a curved surgical needle, or by pushing it through, simply doubled on itself. It is, however, more easily passed by threading it in the eye of the bone drill or in the eye of an ordinary surgical probe. For the purpose Nicoll employs a special probe in which the eye is small and placed very near the extremity of the handle. The loop of ligature is divided and one end is threaded in a large curved surgical needle and passed as a mattress suture through Poupart's ligament. Unthread it from the needle, repeat this with the second end, carrying it through Poupart's ligament at a higher level, avoiding the deep epigastric artery to the outer side, and, in male patients, the spermatic cord above. By means of the probe (into the eye of which the ends are threaded), both ligatures are withdrawn through the second drillhole in the bone. The ends of each loop are tied separately over the front of the bone, thus bringing Poupart's ligament down to the postero superior surface of the bone and fixing it firmly in contact with that surface, constituting what is in effect an extension outward of Gimbernat's ligament, and absolutely closing the femoral ring to whatever extent may be desired, due regard being paid to the amenity of the femoral vein. The degree of occlusion is regulated by the position of the sutures in Poupart's ligament, but not by the tension with which they are tied. This latter does not vary, the knots being tied in all cases firmly to bring the ligament into contact with the bone. To make the closure doubly secure the operation is completed by uniting, by interrupted catgut sutures, the detached margin of the pectineal origin and the

pubic portion of the fascia lata to the "anchored" Poupart's ligament.

42 Radical Operation for Inguinal Hernia.—Eastman has devised a method for introducing a single tier of non absorbable sutures which coapt all the layers either according to Ferguson's or Bassini's methods. These sutures may be removed easily after firm union has taken place. In 11 cases Eastman has used heavy Pagenstecher celloidin linen. The manner of introduction of the sutures is simple. After incision down to the aponeurosis of the external oblique, exposing both rings, the overlying superficial tissues should be wiped with gauze from the aponeurotic layer to such an extent that Poupart's ligament may be freely exposed. After reduction of its contents the sac should be twisted on itself, as practiced by C. H. Mayo, so that all the slack of the peritoneum about the neck of the sac may be taken up before the transfixing suture is introduced. The Pagenstecher linen suture bearing a needle on each end, is first passed through Poupart's ligament from without inward one inch from its free margin. It is then passed through the outer border of the internal oblique and transversalis muscles and brought back through Poupart's ligament about one third of an inch nearer the margin of this ligament than its first point of passage. The needle, now external to and above Poupart's ligament, is made to overlap the free margins of Poupart's ligament and the aponeurosis of the external oblique by carrying the linen through in the form of a simple running mattress suture. The needle is next passed through the superficial fascia, panniculus adiposus and skin, emerging about one eighth of an inch from the skin wound margin on the side opposite Poupart's ligament. The needle on the tail end of the suture is brought up through the subcutaneous fat and skin on the side of Poupart's ligament. When traction is made on the two ends of the suture no kinks or curls remain, and the suture is tied up as a simple loop and, being clipped, may be drawn out with the slightest traction.

St Paul Medical Journal.

February

- 43 Music as a Therapeutic Agent. J. Knott, Dublin, Ireland
- 44 Endocarditis in Children. T. Lowe Pipestone, Minn.
- 45 Fracture of the Clavicle. J. King, Fulda, Minn.
- 46 Surgical Technic. C. P. Thomas, Spokane, Wash.

45 Fracture of the Clavicle.—King has employed a number of dressings for fractured clavicle and finding none of them quite satisfactory, he now applies the following in most of his cases. Having removed the clothing from the chest, he applies a zinc oxid strip, of length and width suitable to the patient's size, placing the initial end at the inferior angle of the scapula, running it upward and outward over the top of the shoulder on the affected side, down under the axilla and then transversely across the back around the body to the midsternal line. The object of this strip is to fix the scapula, which King regards as the most important point in any method of dressing. Then he puts on a second strip, beginning at the free border of the ribs anteriorly, running it up over the tilted end of the inner fragment and down the back to several inches below the scapula. This assists in overcoming the pull of the sterno mastoid. In suitable cases, when the patient is lean in flesh, small, tightly wadded rolls of cotton may be placed in the supraclavicular and infraclavicular fossae before this second strip is applied, they will act as splints to the clavicle. Pads in the axilla, large and hard enough to overcome the inward pull of the pectorales and scapular muscles, can seldom be borne on account of pain and pressure symptoms, however, a small pad of gauze and cotton is useful in absorbing sweat and odor. A snugly fitting undergarment may now be put on. The dressing is completed by placing the hand and arm in proper position and applying a snugly fitting Velpeau bandage.

Interstate Medical Journal, St Louis, Mo

January

- 47 *Annual Medical Progress Number

47 Annual Progress Number.—For several years it has been the custom of this journal to review the progress made in medicine during the preceding year. The present issue con-

sists of 216 pages. The department of internal medicine, conducted by Dr J S Myer, is devoted entirely to a consideration of some of the recent literature on diseases of the stomach. Dr W Bartlett, in charge of the department of surgery, devotes considerable space to physiologic surgery. Dr A E Taussig discusses the contributions to laboratory diagnosis, particularly the methods dealing with the diagnosis of gastrointestinal affections. Dr W Baumgarten, in charge of the department of therapeutics, reviews the advances made in serum therapy and roentgenotherapy, and also mentions the agitation against the evil of nostrum vending. The departments of pediatrics, pathology and bacteriology and obstetrics and gynecology, orthopedics, neurology and psychiatry, genitourinary surgery, laryngology and otology, dermatology and syphilis, and ophthalmology are also well taken care of by those in charge, making this issue a most valuable one for those who wish to know of the progress made in all departments of medicine.

Journal of Experimental Medicine, New York January

- 48 Effect of Eosin on Tetanus Toxin and on Tetanus in Rats and Guinea Pigs S Flexner and H Noguchi, New York
- 49 Physiology of Heart block in Mammals with Especial Reference to the Causation of Stokes Adams Disease. J Erlanger
- 50 *Effect of Changes in Temperature on the Viscosity of the Living Blood R Burton Opitz, New York.
- 51 *Experimental Cirrhosis of the Liver R M Pearce Albany N Y
- 52 Experimental Arteriosclerosis R M Pearce and E MacD Stanton Albany N Y
- 53 Certain Thermostable Venom Activators H Noguchi New York
- 54 Multiple Non Inflammatory Necrosis of the Liver with Jaundice (Hepar Necroticum Cum Ictero) and to the Knowledge of Cell Degeneration and Cytolysis in General H Oertel New York
- 55 Neuroma Embryonale of the Choroid Plexus of the Cat. H S Steensland, New York
- 56 Studies on the Toxicity of the Bile S J Maltzer and W Salant, New York
- 57 Constituent of the Bile Causing Pancreatitis and the Effect of Colloids on Its Action. S Flexner New York.
- 58 Carbohydrate Group in the Nucleoproteid of the Spleen P A Levene and J A Mandel, New York.
- 59 A Certain Crystalline Body Obtained on the Prolonged Digestion of Gelatine P A Levene New York.
- 60 Gastric Ulcers in Rabbits Following Resection of the Pneumogastric Nerve Below the Diaphragm. W Ophüls San Francisco Cal

50 Effect of Temperature on Viscosity of Living Blood.—To solve the question of whether or not it is possible to alter the viscosity of the circulating blood by changing the temperature of the surrounding medium, Burton Opitz performed a series of experiments on dogs in accordance with the method described by Huertl. Six experiments in all were made, three with warm (44 C) and three with cold water (23 C). The experiments proved conclusively that the viscosity of the blood reacts very sharply to changes in the temperature of the surrounding medium. The viscosity is decreased by warm and increased by cold water baths. Warm water baths also produced a decrease and cold water baths an increase in the specific gravity of the blood. On the other hand, it was found that hot air baths render the blood more viscous and that they also increase the specific gravity of the blood, just the opposite of the result obtained with warm or cold water.

51 Experimental Cirrhosis of the Liver.—The experiments performed by Pearce demonstrated that the reparative process which follows the widespread necrosis of the dog's liver caused by the injection of hemagglutinative serum constitutes a chronic interstitial hepatitis of definite and constant character. This is not only a new type of experimental hepatic lesion but is more definitely a cirrhosis than is any other experimental lesion hitherto described. It is of importance in explaining the histogenesis of cirrhosis and incidentally various repair processes in the liver, but it does not aid in the elucidation of the etiology of cirrhosis in man nor does it explain the peculiar arrangement of the new connective tissue in any form of human cirrhosis except, possibly, that associated with chronic passive congestion. It definitely demonstrates however that cirrhosis may follow extensive primary destructive lesions a view not yet fully accepted and supports the contention of Kretz that cirrhosis is essentially a reparative process.

Colorado Medical Journal, Denver January

- 61 Tuberculosis in the State Institutions of Tennessee W J McMurray Nashville
- 62 Rational Way to Treat or the Use of Common Sense in the Treatment Management and Prevention of Tuberculous Diseases J C LeHardy Savannah Ga
- 63 Methods of Treatment of Tuberculosis A C Foster, Morgantown Ky

Fort Wayne Medical Journal-Magazine January

- 64 Status of Venereal Diseases G Van Sweringen Ft. Wayne
- 65 Foreign Bodies in the Eye Complications Produced, Treatment A E Bulson, Jr., Ft Wayne

Illinois Medical Journal, Springfield. January

- 66 Charitable and Penal Institutions of Illinois C S Deneen Springfield
- 67 Economic Aspect of the Modern Treatment of Tuberculosis J W Pettit Ottawa
- 68 Sanatorium Treatment of Tuberculosis in Colorado G W Holden Denver
- 69 Ignorance as a Cause of Disease and Disaster D Lewis Chicago
- 70 Alcohol and the Mind C L Hamilton Dwight
- 71 Some Special Phases of Ear Cases J B Taylor, Bloomington
- 72 Ulcer of the Stomach W E Guthrie, Bloomington

Medical Sentinel, Portland, Ore January

- 73 Practical Side of Infant Feeding R J Marsh Portland
- 74 The Medical Profession B A Cathey Corvallis Oregon
- 75 Placenta Praevia T O Boyd Twin Falls, Idaho
- 76 Oregon Practically an Unorganized State J N McCormack Bowling Green, Ky

California State Journal of Medicine, San Francisco January

- 77 Relation of the Nitrogenous and the Carbonous Metabolism in Disease A E Taylor San Francisco
- 78 Spirochæta Pallida S Blum San Francisco
- 79 Relation of Bacteria to the Development of Gallstones A J Lartigau San Francisco
- 80 Radical Cure of Umbilical Hernia A W Morton San Francisco
- 81 Further Data on the Chest Shape in Tuberculosis W Hutchinson, Redlands

Louisville Monthly Journal of Medicine and Surgery January

- 82 Thoracic Resection for Tumor Growing from the Bony Wall of the Chest W O Roberts Louisville
- 83 Erysipelas D O Hancock Henderson Ky
- 84 Osler's Nonsense D L Field Jeffersonville Ind.
- 85 Modification of Earls Pile Clamp O E Bloch Louisville
- 86 Solving Problems in Diseases of Children W Wormley, Philadelphia.

Journal of the Mississippi State Medical Association, Vicksburg January

- 87 Medical Evolution Since 1860 V M Neal Hillsboro
- 88 Removal of Ovarian Tumor Complicated with Carcinoma of Stomach—Cocain Anesthesia W W Crawford, Hattiesburg
- 89 Presidents Address Before Leflore County Medical Society February 6 1905 Greenwood S A Eggleston Shell Mound
- 90 Pneumonia L B Sparkman Cleveland
- 91 Empyema D W Jones Fernwood

Chicago Medical Recorder January

- 92 Differential Diagnosis Between Some of the Serious Sequelæ of Purulent Otitis Media F Allport Chicago
- 93 Coxa Vara Adolescentium W Blanchard, Chicago
- 94 Prognosis in Heart Disease F S Johnson Chicago
- 95 Tuberculin and Antituberculosis Sera R C Whitman Chicago

American Journal of Urology, New York January

- 96 Hysterical Anuria F Garceau and J W Courtney Boston.
- 97 Tumors of the Bladder with Particular Reference to Sarcoma M Loewenheim
- 98 Nephroposis from the Gastroenterologic View Point R C Kemp New York

The Postgraduate, New York. January

- 99 Case Presenting the Clinical Features and Blood Findings of Pernicious Anemia Recovery A F Chase New York
- 100 When and How Shall Uterine Fibromyomata Be Operated On J West, New York
- 101 Injuries of the Eye Following Paraffin Injection in the Nose W Thibault Breslau
- 102 Final Report on the Russell Treatment of Pulmonary Tuberculosis T W Bickerton and D M Earstov New York

Virginia Medical Semi-Monthly, Richmond January 12

- 103 Volvulus Testis R C Bryan Richmond
- 104 Some of the Difficulties of Diagnosis and Operation in Diseases of the Pteryx Tract W P Carr Washington D C
- 105 Quinsy and Its Sequelæ J Dunn Richmond

- 106 Principles of Surgery S. McGuire Richmond
 107 Quilva Its Diagnosis and Treatment C. M. Miller Richmond
 108 Colter R. D. Garcia Richmond

New York State Journal of Medicine
 January

- 119 What Organized Malpractice Defense Does for the Profession and the Public I. P. Lewis New York
 110 Macroscopic Diagnosis and General Indication for Treatment of Cancer of the Larynx J. N. Macdonald Baltimore Md
 111 Carcinoma of the Larynx D. B. Delavan New York
 112 Mediastinal Tumors W. I. Campbell Brooklyn N. Y.
 113 Protection of the New York Milk Supply W. Lancel New York
 114 Relations of Appendicitis to Diseases of the Uterine Appendix and Vice Versa H. P. Incl. Canuto, N. Y.

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis
 January 1

- 115 Tuberculous Kidney Disease M. C. Miller Rochester Minn
 116 Congenital Dislocation of the Hip I. S. Tolst Minneapolis
 117 Siphili of the Liver and Its Operative Treatment A. MacLaren St. Paul
 118 Bladder Exstrophy R. C. Dugan Evans Minn

January 15

- 119 Present State of Our Knowledge Concerning the Therapeutic Value of the X-Ray B. Foster St. Paul
 120 Diagnosis of Gallstone Disease G. G. Fitch Minneapolis
 121 Renal Capsulation for Chronic Bright's Disease L. J. Schryau Mankato Minn
 122 Interstitial Uterine Fibroma J. W. Little Minneapolis

Southern California Practitioner, Los Angeles
 January

- 123 Symptomatology of Nephritis G. L. Cole Los Angeles
 124 Trachoma—Its Causes and Diagnosis H. B. Ellis Los Angeles
 125 Displacement of the Uterus and Its Treatment J. D. Shorth Los Angeles
 126 The Worm Doctor F. L. Davidson Los Angeles
 127 Splenoptosis H. B. Montgomery Los Angeles
 128 Two Pioneer Doctors of Los Angeles H. D. Barrows Los Angeles

Virginia Medical Semi-Monthly, Richmond
 January 20

- 129 Management of Normal Labor for the Prevention of Puerperal Infections H. Old Norfolk Va
 130 Pathologic Aspect of Puerperal Infection I. C. S. Tallaferra Norfolk
 131 Surgical Aspects of Puerperal Infections L. Gwathmey Norfolk
 132 Some Uses of Polio Massage J. I. Johnson Washington, D. C.
 133 Diagnosis of Nephrolithiasis C. D. Kellam Norfolk
 134 Pneumo-gastric Cough C. P. Jones, Newport News Va

Pennsylvania Medical Journal, Athens, Pa
 January

- 135 Address in Obstetrics I. B. Everett Philadelphia
 136 *Adaptation of the General Public to the Principles and Practice of the Prevention of Tuberculosis H. S. Anders, Philadelphia
 137 *Diagnosis of Incipient Pulmonary Tuberculosis G. W. Norris Philadelphia
 138 *Sanatorium Treatment of Tuberculosis G. B. Kalb Erie
 139 *Outdoor Life Versus Confinement in the Treatment of Bone Tuberculosis H. A. Wilson, Philadelphia
 140 Sanatorium Treatment for the Indigent Tuberculous B. H. Detwiler, Williamsport
 141 Results of Filoid Employment of Diphtheria Antitoxin I. N. Snively, Philadelphia

130 139—See abstract in THE JOURNAL, Oct 21, 1905, page 1271

Medical Fortnightly, St Louis
 January 10

- 142 Treatment of Neurasthenia C. K. Mills Philadelphia
 143 Gonorrhea and Some of Its Results I. G. Ballenger, Atlanta, Ga
 144 Parturient Sepsis C. E. Ruth Keokuk Iowa
 145 Nerves of the Genital Tract B. Robinson, Chicago
 146 Mucocolitis W. T. Knox, Manchester, Ill

Kansas City Medical Index-Lancet
 January

- 147 *Psychopathic Manifestations of the Non Insane Psychoneurosis J. Panton, Kansas City
 148 Appendicitis with Death from Complications H. C. Crowell, Kansas City
 149 Surgery of Typhoid Fever St. E. Sanders Kansas City
 150 Invagination or Prolapse of the Distal End of the Ureter in the Bladder B. Robinson, Chicago

147—This article appeared in THE JOURNAL, Dec 2, 1905

Journal of Mental Pathology, New York

- 151 Reflex and Automatic Excitability S. Sergi, Rome, Italy
 152 Neurasthenia and Neuro Hyperesthesia of Grocco P. Timpano, Bova Reggio Calabria
 153 Electric Sleep, An Experimental Study with an Electric Current of Low Tension L. G. Robinovitch, New York

Journal of the South Carolina Medical Association, Charleston
 January

- 155 Pathogenic Protozoa G. McI. Mood Charleston
 156 Diagnosis of Disease Resultant on Lesions in the Vascular System W. I. Cornell, Charleston
 157 Appendicitis A. B. Baker, Charleston

Journal of Medical Research, Boston, Mass
 January

- 158 Critical Review of the Literature on Experimental Variola and Vaccinia in the Monkey W. R. Brinckerhoff and E. E. Tizzer
 159 Histology of the Skin Lesions in Varicella E. E. Tizzer
 160 Case of Pott's Disease in the Monkey L. E. Southard, Boston
 161 Experimental Work in Relation to Micrococcus Rheumaticus and Streptococcus Pyogenes I. M. Beattie
 162 New Colony Counter and Dissecting Microscope A. H. Stewart Philadelphia
 163 Cystic Aplasia of the Cerebral Hemispheres in an Idiot Child W. N. Pullard and I. L. Southard Boston
 164 Experimental Myiasis in Goats, with a Study of the Life Cycle of the Fly Used in the Experiment I. C. Wellman, Benguela Angola West Africa
 165 Methods for the Localization of Potassium and Phosphorous M. Tracy, New York

Texas Medical News, Austin
 January

- 166 Pseudo Bulbar Paralysis Asthenic Type J. S. Wooten, Austin
 167 When to Operate in Appendicitis H. B. Hill, Austin
 168 Rheumatism as a Factor Entering into Eye and Throat Diseases C. Jones Ft. Worth, Texas
 169 The Country Doctor W. S. Christian

Women's Medical Journal, Toledo, Ohio
 January

- 170 Non operative Treatment of Prolapse of the Uterus K. C. Mead, Middletown, Conn

Buffalo Medical Journal
 January

- 171 Non tuberculous Joint Lesions R. O. Melsenbach Buffalo
 172 Tetanus L. M. Coss Cataraugus, N. Y.
 173 Publotomy M. C. Breuer Buffalo
 174 Treatment of Coughs N. G. Price, Newark, N. J.

Texas State Journal of Medicine, Fort Worth.
 January

- 175 Organization and Its Advantages to the Individual Doctor I. N. McCormack, Bowling Green, Ky
 176 Tuberculosis in Texas Penitentiaries E. E. Guinn, Jacksonville
 177 Influence of Heredity Training and Environment on Men tality W. F. West Waxahachie Texas
 178 Cause of Ununited Fractures R. W. Knox Houston
 179 Injuries at the Elbow Joint O. L. Norworthy, Houston
 180 Case of Abdominal Pregnancy S. R. Burroughs, Buffalo
 181 Removal of Submerged Inguinal Tonsils F. D. Boyd, Ft. Worth
 182 Plea for the Earlier Recognition and Removal of Uterine Cancer J. H. Reuss Dallas
 183 Complete Removal of the Tonsils W. B. Howard Dallas
 184 Tuberculosis Cutis verrucosa J. B. Shelmore Dallas

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal
 February 3

- 1 Acute Bone Disease in Children E. Owen
 2 *At What Age Should a Cleft of the Palate Be Closed? R. W. Murray
 3 *Closure of Gaps in the Skull J. H. Pringle.
 4 Aural Cases in General Practice S. Paget
 5 *Indications for Operation in Chronic Suppurative Disease of the Middle Ear W. S. Syme
 6 Some Varieties of Hernia in Children E. S. Carmichael
 7 X-Ray Treatment of Ringworm G. Schell
 8 Does Diachylon Affect the Infant When It Fails to Produce Abortion? R. Heells, F. H. Jacob and S. R. Trotman

2 When to Operate for Cleft Palate—Murray prefers, as a general rule, to postpone operating on the palate until the child is between 2 and 3 years of age, and then to close the cleft completely at one operation. At that age there is more tissue to work with and it is generally possible to fashion a good, soft palate and uvula by paring the edges of the cleft and uniting them in the middle line. Excess of cicatricial tissue is thus obviated, for union takes place by first intention. The powers of articulation also are improved.

3 Closure of Gaps in Skull—Pringle favors filling gaps in the skull with celluloid plates after the method devised by Fraenkel. Of six patients so treated, three operations were successful and two failed, the plate requiring to be removed because of sepsis. The sixth patient had two plates inserted, one healed in well and the other had to be removed because of

sepsis extending from the nasal cavity. Of the three successful cases, one patient has worn the plate for eight years, and the remaining two patients have worn theirs for more than three and a half years.

5 Indications for Operation in Suppurative Middle Ear Disease—The objective signs mentioned by Syme as indications for operation are: 1 Pain on pressure over the mastoid, or more particularly over the antrum. This may or may not be accompanied by postauricular swelling. 2 A sinus behind the ear leading to an erosion in the bone. 3 Caries of the petrous bone. 4 An extensive or recurring growth of granulation tissue, pointing to invasion of the bone. 5 Facial paralysis. 6 The presence of thick, cheesy masses in the tympanic cavity, the inference being that the same condition exists in the antrum. 7 Very foul smelling discharge. 8 Stenosis of the meatus, either membranous or bony, either or both of which may be due to the irritation caused by the purulent discharge. 9 Persistent discharge in spite of regular and thorough antiseptic treatment. The subjective phenomena to be considered with regard to the advisability of or the necessity for operation are pain, vertigo, change in the hearing, and all symptoms which point to the impending onset or to the actual consummation of an intracranial infection. Syme says that in the larger proportion of cases of chronic otorrhea the patients do not show, at the time they present themselves for treatment, any of these indications. In such cases the ordinary antiseptic treatment with, if necessary, the rectification of an intranasal or pharyngeal condition, or in certain cases ossi-culectomy, should be given a trial. If these measures do not affect a cessation of the disease within a reasonable time, its continuance should then be taken as a strong indication for radical operation.

The Lancet, London.

February 3

- 9 The Acute Abdomen. W H Battle
- 10 Placenta Praevia. R. Warren.
- 11 Points in the Treatment of Heart Failure in Diphtheria. C. Bolton
- 12 Eucalyptus Oil as a Vermifuge in Ankylostomiasis. L. P. Phillips
- 13 Aberrant Vaccinia. M. E. Paul
- 14 Study of Mental Fatigue in School Children. J. Bellef
- 15 A Case of Glanders. L. Woodcock.
- 16 Rupture of the Uterus with Illustrative Cases. T. Wilson
- 17 Dermoid Tumor of the Mediastinum in a Child Aged Two Years. G. Carpenter
- 18 Uniform Lineal Growth of the Human Fetus. R. C. Roberts.

10 Placenta Praevia—Warren reports a series of 94 cases in which six mothers died, or 6.3 per cent, while of 93 infants 49 died, or 52 per cent. As regards parity, of the 76 cases in which it is mentioned 12 were primiparae whilst 36 had had five labors or more previously. None of the primiparae died, which is a matter of some interest, since King in his series found the mortality of primiparae to be 30 per cent, the general mortality in his collection being 22 per cent. Twin labors occurred twice in the series, of which three infants and one mother died. Recurrence in one case is noted in the three preceding labors. Hydramnios was reported in 4 cases, 2 of these being of the 10 cases seen personally. Prolapse of the cord happened in 3 cases out of 54 in which the de Ribes bag was not used, and in 4 cases out of 40 in which it was used. Post partum flooding was noted in 14 cases, in 4 of which the placenta was adherent, adherence of the placenta was found in 2 other cases without postpartum hemorrhage. There seems to be a peculiar tendency for a placenta with a low implantation to become adherent. In 2 cases of postpartum hemorrhage there was atony of the uterus, both died. One case of puerperal melancholia is recorded. In one group of 27 cases only such minor steps as rupturing the membranes or giving ergot were taken. There was no case of complete placenta praevia in the group. In 6 other cases bipolar version was the treatment adopted. Twenty-one patients were treated by internal version or manual delivery in the case of pelvic presentations. Of the 21 mothers 5 died and of the 22 children 14 died. Forty patients were treated by the insertion of the de Ribes bag. None of the mothers died, 25 of the infants died.

11 Treatment of Heart Failure in Diphtheria—Bolton speaks of the value of the early administration of antitoxin in sufficiently large doses as a preventive of heart failure.

12 Eucalyptus Oil in Ankylostomiasis—Phillips' plan of treatment is as follows. About 6 p.m. the patient takes a saline purge and then fasts all night. On the next morning he takes half of the following mixture, taking the remaining half an hour later.

R	Olei eucalypti	3ss	2
	Chloroformi	gtt	xlv
	Olei ricini	3x	40

In young boys and in feeble anemic patients the dose is divided into thirds and given at twenty-minute intervals. The dose can be repeated every second day. In 44 cases of ankylostomiasis the treatment was wholly successful. In 21 cases a single dose was sufficient, and in 16 cases two administrations were necessary. Phillips is convinced that the treatment is satisfactory with reference to its vermifuge effects.

17 Dermoid Tumor of Mediastinum—Carpenter reports a case of this nature which occurred in a female child 2 years old. About a year before he first saw her she became languid, contracted a cough and subsequently developed pneumonia. At this time the chest was noticed to be bulging. She could not lie down, her respirations were accelerated, and she complained of pain in her side. When admitted to the hospital she was cyanosed and there was sucking in of the lower intercostal spaces, mostly on the left side. The right side of the chest, in front, was dull from apex to base. On the left side, in front, there were dullness and tubular breathing above and below the clavicle. On the right side, behind, the chest was absolutely dull. The liver was displaced downward and there was a distinct depression between the liver and the costal margin. The radiograph which was taken at that time showed that the whole of the right side was opaque to the rays. The child died shortly afterward, and a postmortem examination was made. In front of the right lung was a mass the size of a fist. On incising this from six to eight ounces of clear fluid escaped. Inside the cyst was some cheesy material with a few hairs lying at the bottom. The rest of the tumor felt hard, although it consisted of a considerable number of cysts, most of which contained a gelatinous material of a light brownish color.

The Practitioner, London

February

- 19 Normal Daily Temperature Variation and Its Modifications in Pulmonary Tuberculosis. J. J. Galbraith
- 20 Sterilization of the Hands. R. A. Stoney
- 21 Foreign Bodies in the Uterus. J. B. Hellier
- 22 Food Factor in the Paroxysmal Neuroses. F. Hare
- 23 Chorea Gravidarum. J. S. Sheil
- 24 Some Aspects of Pelvic Appendicitis. G. G. Turner
- 25 Tissue Metabolism of Phthisis Pulmonalis. Albumosuria, and the Thoracic Indices of Phthisis. A. S. Parkinson.
- 26 Recent Reports Concerning Endotheliomata and Peritheliomata. A. Carless
- 27 Fibroid Tumor of the Vagina. G. F. B. Simpson

20 Sterilization of Hands—The results of experiments have convinced Stoney that it is possible to render the hands sterile or at least free from pathogenic bacteria by a simple and short method which does not require more than ten minutes. Therefore, the wearing of gloves during the performance of an aseptic operation is not necessary, though Stoney thinks it is advisable in the case of those operators whose skin is either unusually difficult to sterilize or easily injured by the constant use of antiseptics. The method employed by Stoney is as follows: 1, Scrubbing with a sterilized nail brush in hot water (as hot as can be borne) with carbolie soap for five minutes, several changes of water being used; 2, rubbing thoroughly with sterile gauze wet with methylated spirit; 3, immersion for one minute in a watery solution of biniodid of mercury (1 to 1,500). In every case the hands, instruments, silk, etc., were rinsed in sterile water in order to remove any excess of antiseptic which might interfere with the growth of organisms in the culture tubes. In all cases the hands were tested while wet and sufficient force was used both with the silk ligatures and scraper to remove a visible amount of epithelial debris.

21 Foreign Bodies in Uterus—The foreign body in the uterus in the case reported by Hellier was an ordinary hairpin which the patient had introduced into the uterus. One point of the pin projected from the middle of the posterior lip of the uterus just above the surface of the mucous membrane, and

patient by congestive hyperemia, as they are able to do more harm than with the knife. If the physician has patience enough he should commence with mild cases and suspend the treatment if he does not succeed in banishing the pain, applying it again to the next appropriate case. By this tentative use of the new method he will soon gain confidence and enable his patients to profit by what Stich calls "this fruit of Bier's genius." The finest results are obtained with tendon sheath inflammations. The pain is relieved, the process aborted or shortened and complete functional restitution is the rule. When the congestive hyperemia was induced with a suction cup fitting over the lesion into sound tissue around as in case of furuncles or carbuncles the pain subsided and the lesion healed after from two to ten applications sooner than with other techniques. In 50 cases the measure failed in only 3 instances. In the severer cases of osteomyelitis the results were less satisfactory. One of the 2 patients with acute arthritis was a physician suffering intensely from inflammation of the elbow and of the articulation between the atlas and the occipital bone the result of gonorrheal infection five weeks previously. He was skeptical in regard to the congestive hyperemia but the prompt relief of his pain soon converted him and his auto-observation proved instructive, as he resorted to the slightest blunder in technique. It was remarked in his case that the constriction of the arm and neck had to be a little tighter when he was reclining than when he was sitting up to obtain the same results. The articulations involved healed without the least impairment of function.

70 Detachment of Retina Cured for 21 Years—Cohn describes the case of a patient with detachment of the retina who has been under observation for twenty-three years. The man was treated with sclerotomy twice repeated the cure thus obtained persisting unchanged for seventeen years to date. He discusses the various methods of treating detachment of the retina, preaching always, "Everything out, never anything into the eye." Puncture of the sclerotic with the Graefe knife is the most promising measure, he says. He has performed sclerotomy 30 times, frequently with excellent results. In one case a girl was cured by darkness, revulsion and leeches without operative intervention, the cure persisting till her death twenty-seven years later. In his experience with 100,000 cases of eye affections he has encountered only 559 of detachment of the retina. When there is still perception of light, he advises repeated sclerotomy, a pressure bandage, diaphoresis with laborandi and purgatives. These measures will sometimes cure the detachment permanently, as in the case specially reported. Lithoff has cured 28 out of 337 patients treated by sclerotomy, as he is going to relate in detail at the Lisbon congress. Deutschmann has also had 7 patients cured for over ten years by this means.

71 Treatment of Retention of Testicle—Katzenstein reviews the anatomic conditions and affirms that operative treatment of the testicle retained in the inguinal canal should not be attempted before the eighth or tenth year, although when complicated with hernia it demands immediate treatment at any age. He operates by drawing the testicle down into place with a thread passed through the tunica albuginea and tunica vaginalis of the retained organ. After the thread is thus passed through the testicle, through an incision over the inguinal canal, it is seized from below with long forceps introduced through the scrotum. The testicle is thus drawn down into place and is held there by being fastened to a flap from the inside of the thigh about the size of a quarter, with a broad pedicle. The under side of this flap is sutured to the testicle, four stitches embracing the tunica albuginea. This holds the testicle and stretches the spermatic cord. Every step taken exerts traction on the cord by means of the attached flap from the thigh. After a few weeks the cord becomes permanently stretched, and the base of the flap uniting it with the thigh can then be severed. He has performed this operation fifteen times on 10 individuals. In every case the testicle has remained in its normal place and has grown in size. The wounds were treated with bismuth or a paste, and protected with a light dressing. The patient was kept in bed for a week or so and the leg gradually used. Others have modified his original procedure by fastening a string to the testicle and passing the string around the foot, thus exerting traction on the spermatic cord

from the foot. Longard and Lan/ fasten the testicle to the thigh with adhesive plaster, but this is not sufficient in case of a very elastic spermatic cord. Others still have implanted the testicle in the thigh, but general anesthesia is required for its final restoration to place. Katzenstein claims that his technique is sufficient and superior, as it is simple and gives ideal results.

Münchener med Wochenschrift, Munich.

- 71 (LII, No. 49) *Ueber Wundbehandlung und Wundverband L. Graser
- 75 Wert der Sonderrmannschen Saug Apparates zur Diagnose und Therapie der Nasenerkrankungen (aspiration treatment of nasal affections) A. Honneth
- 76 *Ueber Operationen im Hause des Patienten II Ladenburger
- 77 Forced Feeding in Enteroptosis—Die Bedeutung der Zellen mit Riedels Kraft Nahrung für Behandlung der schlaffen Involutionsentungen und ihrer Folge und Begleitzustände W. N. Clemm
- 78 Zur Technik der Klammernaht nach Michel (suturing with clip) I. Hertka
- 79 Ueber die Messung der Hauttemperatur (of skin) II. Senator
- 80 The Left Hemisphere and Action—Die linke Hemisphäre und das Handeln II. Liepmann (Concluded)

71 General Principles of Treatment of Wounds—Graser dwells on the necessity for training young physicians in the importance of keeping their hands from contact with septic material. It is not necessary to take hold of soiled dressings nor feel of a pus focus. With practice one soon learns to change the dressings and apply ligatures without touching them with the fingers, except the ends of the suture threads. "Take away your fingers," is his constant, reiterated admonition to his assistants, so that "Finger weg" is said to be his motto. He has trained himself until he can now palpate and operate in well fitting rubber gloves as well as without them. In the after treatment of wounds he preaches that all wounds that can be completely sutured may be left exposed to the air. The crevices are plugged by the coagulating blood and the wound heals as under a natural scab. The surgeon has to overcome his prejudices before he is willing to leave a wound thus exposed, but the wider his experience the greater his confidence. Before the sutures are finally tied, the last drops of blood are squeezed out, and then a piece of thin gauze is laid over it, held at the edges with collodion, but leaving the wound untouched beneath it. This allows the entrance of air and favors the drying of the coagulated blood into protecting scabs. He thus treats all sutured wounds in the face, almost all laparotomies, appendicectomy incisions and herniotomies. The gauze is applied merely as a screen and can be advantageously omitted in many cases. He follows the same principles in amputations, as he describes in detail with illustrations. He writes from an experience of 500 abdominal operations, 130 amputations, 52 osteotomies and 70 resections of joints, the majority treated according to these principles.

76 Operations at the Patient's Home—Ladenburger has performed 88 major operations at the patient's home, sometimes in a small garret chamber, and he shows how easily and satisfactorily an important operation can be prepared for in an ordinary house. He has the largest and lightest room that can be spared entirely emptied the day beforehand and wiped with wet cloths in the evening. If necessary, sheets are hung up around the walls. He believes that a private house is freer from bacilli than any hospital. Everything that comes in contact with the patient is sterilized by the operator himself and he can thus rely on its being done to suit him. He has a nurse to take care of the patient at night while the housekeeping is done by a woman sent by a local charitable association the "Hauspflegerverein," which was organized to promote these operations at the house instead of breaking up the home by sending the patient, who is often the mother, to a hospital.

Therapie der Gegenwart, Berlin

Last indexed, page 165

- 81 (XLVI No. 12) Zur Diagnose und Therapie spastischer Pseudo Paralyse A. Goldscheider
- 82 Zur Bewertung der Formaldehydtherapie bei der Gicht und harnsäuren Diathese (gout and uric acid diathesis) T. Brugsch
- 83 Die jetzige Behandlung der Knochenbrüche (fractures) M. Martens
- 84 *Eine Methode zur Behandlung von Erkrankungen des Kehlkopfes der Nase und des Ohres (endomassage of throat, nose and ear) M. Herz

- 85 *Intravenöse Jodkallium Injektionen bei Syphilis (potassium iodid) W. Doerevspeck.
 86 *Starch in Diarrhea and Sore Throat.—Stärke bei Durchfall und Halsbeschwerden G. Hauffe
 87 Orthostatische Albuminurie A. Loeb

84 Endomassage of Throat, Nose and Ears—The apparatus devised by Herz has been previously described in these columns. The patient blows into a tube, the air being conveyed by other tubes to the throat, ears or nose, with a click and ratchet, which automatically arrest the current of air intermittently. This produces a succession of puffs of air under pressure in the organs being treated and has a kind of massage effect.

85 Potassium Iodid Intravenously—Doerevspeck pleads the cause of intravenous injection of potassium iodid in fulminating cases of syphilis, or when circumstances forbid the use of mercury and rapid action is necessary. He describes 4 cases in which the rapid benefit was strikingly apparent, this prompt effect being the special advantage of the intravenous route. Very small doses prove effectual. He used 1 gm potassium iodid, giving it in the form of 2 gm of a 5 per cent solution. The injection did not seem to affect the circulation, respiration or temperature, and caused merely slight pain at the point of injection, generally quite transient. In the severe cases of cerebral syphilis he repeated the injection every day for six days.

86 Cooked Starch in Diarrhea and Sore Throat—For years Hauffe has used cooked starch as a soothing gargle in sore throat and also as a means to check diarrhea. In the latter case it is sipped from time to time by the teaspoonful. It was found especially useful in the diarrhea of consumptives, but was beneficial in all varieties.

Virchow's Archiv, Berlin.

Last indexed XLV page 743

- 88 (CLXXXI No 1) Zur Kenntnis des weiblichen Schielwitters (spurious hermaphroditism) J. Fibiger (Copenhagen). Three cases.
 89 Ueber die Defekte im oberen Teile der Kammerscheidewand des Herzens mit Berücksichtigung der Perforation des häutigen Septums (Interventricular septum) O. Hart.
 90 Ein Teratoma der Thyreoiden. P. Jacob.
 91 *Ability of Yeasts to Induce Neoplasms—Ueber die fragliche Fähigkeit gewisser Hefestämme Neubildungen im Tierkörper hervorzurufen. E. Henke and F. Miodowski.
 92 *Experimentelle Beiträge zur Frage kongenitaler Tuberkelbazillen Übertragung und kongenitaler Tuberkulose. F. F. Friedmann.
 93 Ueber subkutane und perikardiale Verkalkungen (calcification) F. Kewandowsky.
 94 Die sogenannte Pylorus Hypertrophie ein Entwicklungsstörung (embryonal anomaly) M. Pfandl.
 95 (No 2) Zur Pathogenese des Icterus. S. Abramow.
 96 *Beitrag zu den traumatischen Erkrankungen des Pankreas. R. Hilgermann.
 97 Ueber die Karzinome des Ductus thoracicus. T. Schwedenberg.
 98 Beziehungen eines Uterus Myoms zu gleichzeitig vorhandenen multiplen Tumoren beider Nieren (both kidneys) R. Eller.
 99 Ueber Myxome des Herzens insbes. der Herzklappen (spec. infly of heart valves) A. Leonhardt.
 100 *Ueber die durch Adrenalin Injektionen zu erzeugende Aortenverkalkung der Kaninchen (calcification of aorta in rabbit) F. Scheidemann.
 101 *Ueber Aorten Ruptur und Arteriosklerose im Kindesalter (in children) R. Oppenheimer.
 102 (No 3) Experimentelle Untersuchungen mit implantierten Hautstücken (scraps of skin) J. Gusmann.
 103 Ueber Degeneration und Regeneration peripherischer Nerven. M. Lapinsky.
 104 Die chemischen Veränderungen bei der fettigen Degeneration in Beziehung zu den anatomischen (fatty degeneration) Di. Cristina.
 105 Ein Interkostom des Mesenteriums und Netzes. C. Roegner.
 106 Zur Genese der mesenterialen Chylangiome. P. Klemm.
 107 Hypertrophie und Arteriosklerose in den Nieren Arterien (of kidneys) L. Jores.

91 Relations of Certain Yeast Fungi to Neoplasms—The extensive researches reported discourage further attempts to connect any of the yeast fungi with the development of neoplasms, malignant or otherwise.

92 Congenital Tuberculosis—Friedmann relates the results of two years' experimental research with the aid of the Bore inoculum. It was noted that week old embryos of rabbits almost invariably contained tubercle bacilli when such bacilli had been injected into the vas deferens of the parent rabbit a few weeks before coupling. If the coupling took place after an interval of more than four weeks conception did not follow. When animals had been infected by way of the lungs and the process had passed into a latent stage no tubercle bacilli could be discovered in the embryos and they developed into healthy

animals. Infection by way of the peritoneum became generalized so quickly that conception seldom followed coupling. A few tubercle bacilli could always be found in week old embryos when, immediately after coupling, tubercle bacilli had been injected into the mother rabbit's vagina. Intraperitoneal and intravenous infection always prevented conception later when the infectious process was in progress. Subcutaneous infection of the mother animal immediately preceding coupling generally resulted in the finding of isolated tubercle bacilli in the liver of the fetus. They had evidently passed through the placenta. They always proved to be avirulent, and the embryos developed into healthy animals. Examination of sections of six pairs of testicles from cadavers of consumptives failed to reveal tubercle bacilli in any quantity. Only two bacilli were found. Similar sections of testicles from lepers showed swarms of lepra bacilli in the sections of the testicles. Friedmann adds that in 983 tuberculous patients with a parental history the father had been tuberculous in 51.2 per cent, the mother in 32.8 per cent and both parents in 15.9 per cent, showing the preponderance of paternal tuberculous records. In all his experiments the embryos, although harboring tubercle bacilli, yet developed normally and were not to be distinguished from normal animals.

96 Trauma in Relation to Affections of the Pancreas—Hilgermann reports a case of carcinoma of the head of the pancreas developing in a healthy man of 50 at the point where he had been injured in an accident eight months before death. The case suggests the possibility that malignant disease may follow trauma of the apparently most inaccessible organs. The development of the symptoms suggested an intimate connection between the injury and the cancer.

100 Calcification of Aorta in Rabbits After Injections of Adrenalin.—Scheidemann's experiments have confirmed those of Josué and others, who found that long continued intravenous injections of adrenalin induced marked changes in the aorta. The changes were very pronounced in some of the rabbits, while in others they were insignificant. The changes resembled more the calcification of the media in the arteries of the extremities in man rather than arteriosclerosis. In order to approximate the conditions of the development of arteriosclerosis in man, the animals should be kept permanently under the influence of blood pressure raising substances, not the mere brief and intense experimental work yet done in this line. (See editorial on page 588.)

101 Arteriosclerosis in Children—Oppenheimer reports 2 cases of arteriosclerosis in boys of 9 and 10. In the first the child succumbed to a spontaneous rupture of the aorta. High blood pressure and a possible congenital weakness of the wall of the artery were the cause of the affection in the first boy, but in the second it was undoubtedly of toxic origin. The pathologic anatomic findings in each case were those of typical arteriosclerosis.

Zeitschrift für Geb. und Gynäkologie, Stuttgart

Last indexed page 474

- 108 (LVI No 3) *Ueber Prophylaxe der Streptokokken Infektion bei Geburt und Operation durch aktive Immunisierung. O. Polano (Würzburg).
 109 *To Obtain a Perfect Clatrix After Laparotomy—Welchen Prinzipien müssen wir zwecks Erzielung einer exakten Laparotomie-Narbe folgen? W. Harnes (Küstner's clinic).
 110 *Zur Ovariectomie in der Gravidität. M. Graefe.
 111 *Influence of Gynecologic Affections on Composition of Blood—Einfluss der Erkrankungen des weiblichen Genitals auf die Blutbeschaffenheit. T. Lelawitz.
 112 Beitrag zur Frage der Ovarial Veränderungen bei Blasen Mole und malignem Chorionepitheliom (changes in ovaries) J. Wallart.
 113 *Relations Between Uterine Myomata and Heart.—Beziehungen zwischen Uterusmyomen und Herz. L. v. Lingen (St. Petersburg).

108 Prophylaxis of Streptococcus Infection Before Childbirth and Operations—Polano argues that the female genital apparatus is constantly exposed to physiologic wounds by the conditions of menstruation and childbirth, and that the natural resisting powers of the individual might be enhanced by artificially rendering her immune to pyrogenic infection. He has succeeded in accomplishing this in laboratory animals. He induced active immunization against the streptococcus and found that the animals became far more resistant to pyrogenic infection afterward than the controls. The independent re-

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IMMEDIATE EXAMINATION OF UTERINE MUCOSA AND MYOMATOUS NODULES AFTER HYSTEROMYOMECTOMY TO EXCLUDE MALIGNANT DISEASE *

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BALTIMORE.

It has long been known that sarcomatous changes may occur in myomata. In 1860¹ Virchow gave a very clear account of the gross and histologic pictures in such cases. In 1872² Chrobak drew attention to this class of cases, and in 1887³ Ritter gave a full survey of the literature up to that date. The question was fully discussed by Williams,⁴ as well as by Schreiber,⁵ in 1894, and in 1895 by L. Pick.⁶ The article of Gessner,⁷ published in 1899, is the most exhaustive that we possess, and will well reward a thorough study. Among the more recent and lucid articles is that of Wier,⁸ published in 1901, and that of Jacob and Wollstein,⁹ which appeared in 1902.

But it was the excellent paper by Charles P. Noble, that first thoroughly aroused gynecologists to an appreciation of the possible danger of allowing myomata to remain year after year without operative interference. His paper was closely followed by those of Hunner and McDonald. In going over the large number of myoma cases that we have had at the Johns Hopkins Hospital I have been surprised at the number of instances in which myomata were associated with carcinoma either of the cervix or body, and at the relatively frequent pictures of sarcomata developing in myomatous tumors. All these cases will shortly be reported in detail by Dr. Kelly and myself.

These findings have a very practical bearing, and at the New Orleans session of the American Medical Association in May, 1903, I advised opening the uterus immediately on its removal as a routine procedure to see if by any chance carcinoma of the body existed.¹⁰ Since that

meeting I have seen several cases that indicate a still further precaution, namely, that we not only carefully explore the uterine cavity at once, but also examine the myomatous nodules. Had such a precaution been adopted in the present case there is a strong probability that the patient might have been saved. The uterus on removal showed nothing unusual. On opening the uterine cavity the mucosa was found everywhere intact and apparently normal. Further examination in the operating room was not undertaken and the specimen was sent to the laboratory. There a longitudinal section was made through the tumor and some degenerative changes were noted, but through an unfortunate circumstance no further examination was made. It was not until after the second operation, more than two years later, when we found a sarcoma springing from the cervical stump, that the original tumor was again examined. The most casual glance showed not only areas of hyaline degeneration in the myoma, but also round and irregular areas of typical sarcoma.

Supravaginal hysterectomy supposedly for simple interstitial and subperitoneal myomata. Two years later sudden collapse due to hemorrhage from a sarcoma developing from the cervical stump (Fig 1). Re-examination of the original tumor showed typical sarcomatous transformation of the myoma (Fig 2). Later intestinal obstruction, artificial anus with complete control. Death eight months after the second operation.

Patient—Mrs. W., aged 42, was seen in consultation on Jan. 22, 1903. For several years the menstrual periods have been exceedingly free. From time to time she has been treated for dyspepsia and for some cardiac lesion, but not until recently has any abdominal enlargement been detected. She is well nourished, but is exceedingly pale. The mucous membranes are blanched and the hemoglobin is 30 per cent. On vaginal examination the cervix is found to be normal. Filling the vaginal vault and extending half way to the umbilicus is an irregular myomatous uterus. Above and to the right is a globular mass the size of a kidney. One of the most interesting phenomena is a bruit felt by the examining finger along the course of the left uterine vessels.

Operation—The uterus was brought up without much difficulty and the large mass felt in the region of the liver proved to be a subperitoneal and pedunculated myoma. The uterus was removed from left to right. The left tube and ovary were not disturbed. The patient stood the operation well and lost very little blood. Phlebitis developed some days after operation, but did not retard her progress very much. Within a month her color had returned, and in less than three months she was in perfect health. I saw her on Jan. 1, 1905, and she was in excellent condition.

Second Operation—Feb. 17, 1905. The patient felt perfectly well and went to market yesterday morning. About 1 p. m. she was taken with pain in the lower abdomen, and a little later on almost fainted while at stool. Dr. Gorter was called to see her and advised immediate removal to the hospital.

On examination, under anesthesia, we found the pelvis partly filled by a mass about the size of a small cocoon. This apparently involved the left side more than the right. The left ovary having been saved at the previous operation, we thought

* Read before the Johns Hopkins Hospital Medical Society.

1. Virchow. Die Krankhaften Geschwülste, vol. III, p. 201.

2. Chrobak. Arch. f. Gynäk. vol. IV.

3. Ritter. Inaugural Dissertation. Ueber d. Myosarkom. Ber. III. 1887.

4. Contributions to the Histology and Histogenesis of Sarcoma of the Uterus. J. Whitridge Williams. American Jour. of Obstetrics, 1894, vol. XXIX, No. 6.

5. Schreiber. Ueber d. Complication von Uterusmyom mit secundärer sarcomatöser Degeneration. Diss. Inaug. Jena. 1894.

6. Pick, L. Zur Histogenese und Classification der Gebärmutter-sarcome. Archiv f. Gynäkologie 1895, vol. XLVIII, p. 24 and Zur Lehre vom Myoma sarcomatosum und über die sogenannten Endotheliome der Gebärmutter. Arch. f. Gynäkologie 1895, vol. XLIX, p. 1.

7. Gessner. Velts Handbuch der Gynäkologie 1899, vol. III, 2d half, p. 957.

8. Wier, Wm. H. Muscle-cell Sarcomata of the uterus. Amer. Jour. of Obstetrics, 1901, vol. XLIII, p. 618.

9. Jacob and Wollstein. Martha. Amer. Jour. of Obstetrics, 1902, vol. XLV, p. 218.

10. Thomas, S. Cullen. Sarcomatous Transformation of Myomata. Journal A. M. A., Aug. 8, 1903.

that this tumor was certainly ovarian in origin. On opening the abdomen the left ovary was found to be perfectly normal, but projecting from the stump of the cervix and extending down between the cervix and rectum was a definite sarcomatous nodule fully 10 cm across (Fig 1). This was somewhat lobulated. It had been slightly lacerated and free bleeding had occurred. We removed at least a quart and a half of rice blood and clots from the abdominal cavity. Her sudden discomfort was evidently due to partial tearing of the growth. We were able to peel the growth out to a great extent, but it was impossible to remove it in its entirety.

The left lobe of the liver was sharp, the right lobe very blunt and thickened. We thought that we were dealing with a hepatic metastasis but on continuing the incision upward found there was merely thickening of the liver. The omentum was free. The appendix was removed.



Fig. 1—Sarcoma developing in the cervical stump (Cyan Path No S 70). The pelvis is viewed from above. Rising from the pelvis between the bladder and the rectum is a smooth lobulated growth presenting a somewhat scarred appearance. To the left is the intact and normal left ovary. The right appendages were removed at the first operation.

The condition is particularly interesting when we remember that the uterus had been removed fully two years before and that for two years the patient had remained perfectly well.

Postoperative History—Patient was readmitted to the Church Home Aug 21, 1905. For the preceding four or five weeks she had had great difficulty in securing an evacuation of the bowels. On examination we found that the pelvis was practically filled with a new growth and that it would be necessary to make an artificial anus. The bladder showed definite involvement by the growth and the urine contained large quantities of blood. I made an incision through the left rectus, brought out the sigmoid flexure, cut it in two, closed the lower end, brought the upper end out through the rectus, passed it outward beneath the sheath of the rectus for about an inch and a half, then made a longitudinal section through the sheath of the rectus and through the fascia to the skin,

attaching the bowel to the skin. The bowel, therefore, was brought upward, then outward and then upward again. The patient experienced a great deal of relief. Her bowels moved once or twice a day, but she had practically absolute control, as there was no escape of fecal matter except at stool. She improved considerably. Occasionally there was some discomfort from the rectal tenesmus due to the ever increasing growth pressing on the remaining portion of the rectum, otherwise she was comfortable. She remained in the hospital until about the first of October. During the last two weeks of her life she became much weaker and died Oct. 30, 1905.

Description of the Sarcoma Developing from the Cervical Stump—The specimen (Fig 1) consists of a mass of tissue 10 by 8 by 5 cm. It is somewhat lobulated, is rather smooth and on its under surface has a basal attachment, extending over an area of about 5 by 5 cm. The tissue is of brain like consistency, yellowish white in color. It tears with the utmost readiness. On section the mass is found to contain a large irregular area of hemorrhage. At one point is a cystic space 2 by 1.5 cm. This is divided by trabeculae into smaller spaces and is filled with blood clots. The general character of the growth is clearly evident without histologic examination.

Histologic Examination—The tumor is found to be made up of a sea of cells. Most of these cells have oval vesicular nuclei and bear a striking resemblance to those of muscle fibers. The cells themselves are spindle shaped with deeply staining nuclei two or three times the natural size. Others are irregular and also stain deeply. Again we have masses of protoplasm containing five or six deeply staining nuclei. At other points there are giant cells where the nuclei are not over one third the usual size. In places are seen spindle cells undergoing division. There are large irregular plaques of protoplasm containing fragmented nuclei and cells showing typical nuclear figures. The nucleus itself is sometimes dividing into five or six young nuclei. The blood vessels are large and abundant. The majority of them appear to be veins. Some are filled with thrombi, and the tumor cells are gradually obliterating them. In fact, dividing tumor cells can be demonstrated living free in such blood vessels. In some places the tissue is much rarified, and in such areas giant cells are particularly abundant. The growth is essentially a spindle celled sarcoma which shows a marked tendency to giant cell formation.

Description of the Original Tumor—The specimen (Fig 2) consists of a globular uterus, approximately 18 cm in diameter. It is smooth and glistening. On the surface one or two nodules can be detected. Attached to the right cornu is a kidney shaped subperitoneal nodule 13 cm in length and 8 cm broad. It is attached by a pedicle 2.5 by 1.5 cm, and is freely movable. The uterine cavity is 17 cm in length and is markedly convex, owing to the fact that the growth projects inward from the posterior wall. The mucosa, on the whole, looks normal, but is atrophic. Near the fundus it has undergone in some places almost complete atrophy, the growth in the posterior wall shining through.

The greater enlargement of the uterus is due to a circular nodule, 13.5 cm. in diameter, occupying the posterior wall. This nodule is almost spherical. The central portion has, in part, undergone typical hyaline degeneration, as is evidenced by large and small spaces traversed by delicate trabeculae. On careful examination there are several areas presenting a homogeneous spongy appearance. These form a part of the myomatous tissue. They vary from 1 to 4 cm. or more in diameter, are irregular in their distribution and have undoubtedly developed from the myomatous tissue. They give the characteristic appearance of sarcoma, and are distributed throughout the solid portion of the tumor, being also intermingled with areas

hyaline degeneration, we have a good many muscle fibers still preserved, and there are quantities of mast cells. The nuclei of the muscle fibers show considerable variation in size and in staining properties. One is instantly reminded of a sarcomatous transformation. In the more characteristic sarcomatous areas where the cells are still preserved we see the same histologic changes. The nuclei are four or five times the natural size, are irregular in outline and stain very deeply. In other places we have very large irregular cells with protoplasm which takes the eosin staining deeply, and irregular nuclei situated in the center or at the margin of the cells. Again, some cells contain six or seven nuclei. The picture instantly

suggests sarcoma, but it is impossible to tell with certainty whether the growth really started in the muscle fibers or whether it originated from the connective tissue. On the whole, we think that the evidences of muscle origin are the more reliable. In some of the hyaline areas the blood vessels still persist, but the endothelium is present and the cells of the vessel wall are stained deeply and are irregular, suggesting that the connective tissue of the vessel wall is also undergoing a malignant change. The deeply staining cells stand out in sharp contrast to the surrounding areas of hyaline degeneration. Both macroscopically and microscopically areas of calcification are evident. At no point do we find any evidence that the sarcoma extends below the confines of the myoma.

After thinking over this case the surgeon will naturally ask, "Why should we not do a complete hysterectomy in all cases?" The supravaginal operation is the easier one, it leaves a better support to the pelvic floor, there is less danger of tying the ureters, and as the blood supply of the bladder is little interfered with there is less likelihood of a postoperative cystitis. The advantages of the supravaginal operation appear to more than outweigh the dangers from malignant changes occurring in or associated with myomata. This case however clearly indicates that we

should carefully examine not only the uterine mucosa for carcinoma, but also the myomata for sarcomatous changes before the cervical stump is closed.

3 West Preston Street

Treatment—As a result of German nihilism, many of the leading text books of the practice of medicine to day are but little more than text books on pathology. In looking through one of the latest and most popular works I was not so much surprised to read pages on diagnosis, etiology, pathology, and then to find the treatment disposed of in a short sentence—Clark in *Chicago Medical Records*.

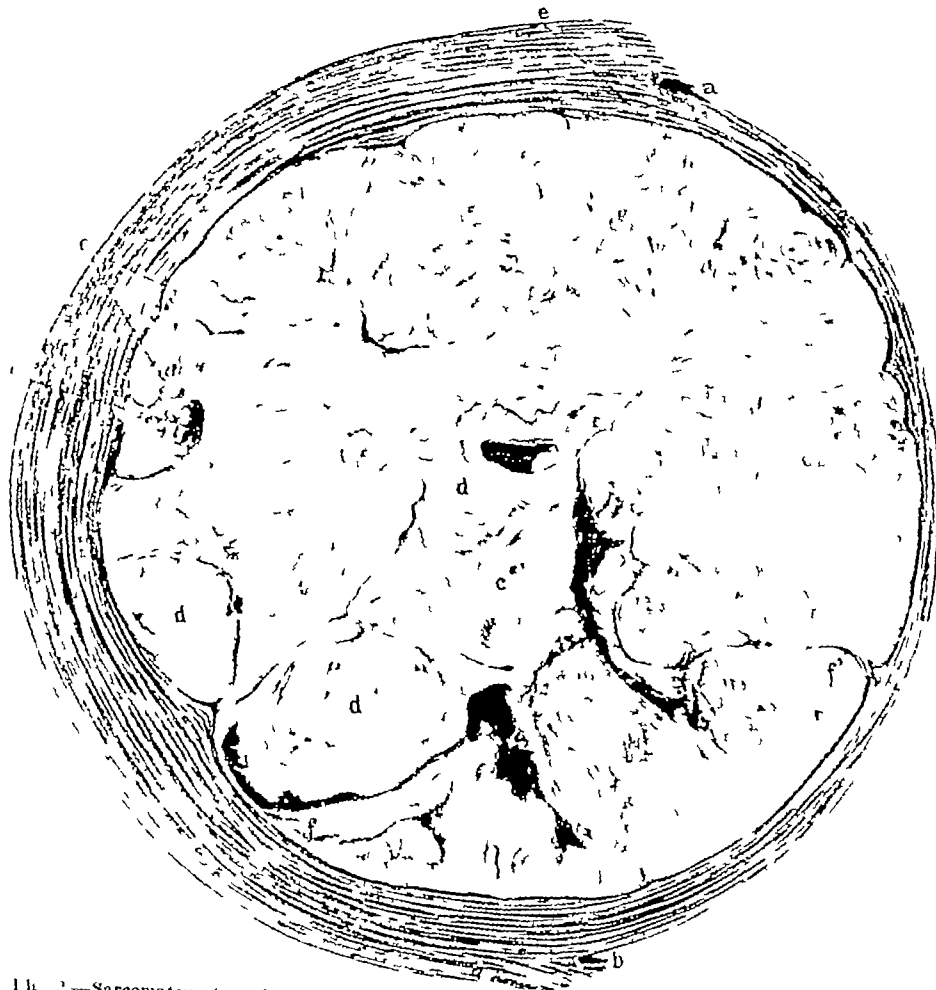


Fig. 2.—Sarcomatous transformation of a uterine myoma. Supravaginal amputation with return of the growth in the cervical stump. (Natural size.) (Gen. Path. No. 6421.) The picture represents a longitudinal section through the entire uterus. *a* Upper limit of the uterine cavity. *b* Lower or cervical portion. It is thus seen that the myoma occupying the posterior wall projected into the uterine cavity and put the mucosa on tension. The myomatous nodule is approximately circular and in many places yields the usual myomatous striation. At *c* is an area of typical hyaline degeneration recognized by its homogeneous appearance. At numerous points indicated by *d* we find sharply outlined granular or spongy areas which are at once recognized as sarcomatous. At *e* along the outer margin of the myoma are areas of sarcoma and the tissue between *f* and *f* is partly myoma partly sarcoma. *g* is an area of calcification.

of hyaline degeneration. Macroscopically one is able to diagnose with absolute certainty that we have a sarcoma developing in the myoma. The uterine wall posterior to the tumor varies from 1 to 1.5 cm. in thickness, and in some places there is a covering from 2 to 5 mm. of uterine muscle separating the growth from the mucosa.

Histologic Examination—The areas indicating hyaline degeneration are entirely devoid of nuclei. Here the tissue has undergone the usual complete hyaline transformation. Many sections have been taken from the areas suggesting sarcoma. In the majority of these most of the elements have undergone complete coagulation necrosis. Here and there, however, in the vicinity of the blood vessels are a good many small round cells. In some of the sections in which there is incomplete

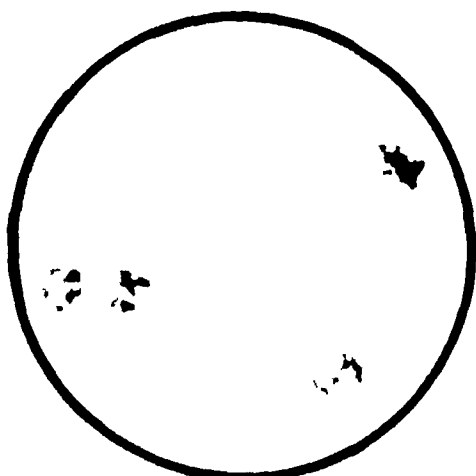


Fig. 1—Four platelets and one red cell in the blood of a case of secondary anemia. Magnified 2 000 diameters

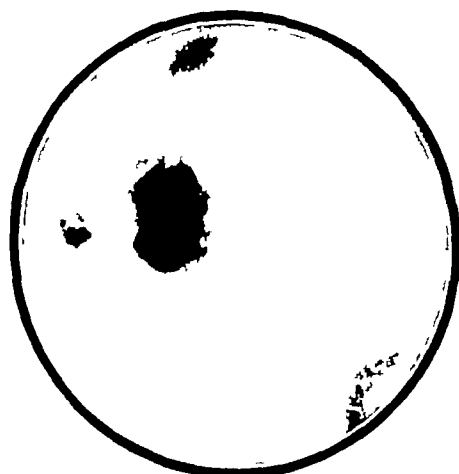


Fig. 5—Platelet containing 2 distinct masses of chromatin on different levels (case of secondary anemia). Magnification 2,000 (or 2 500 ?)

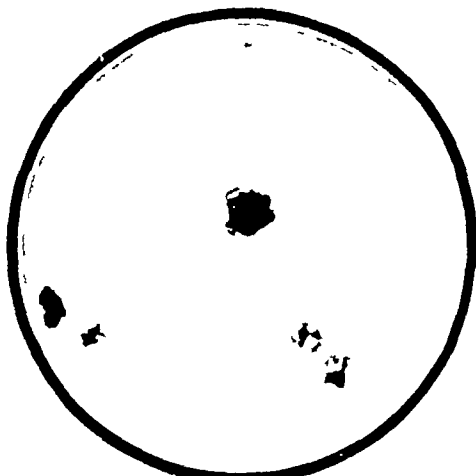


Fig. 2—Platelets in pernicious anemia. (considerable variation in size. One overlaps a corpuscle. (x 2 000)

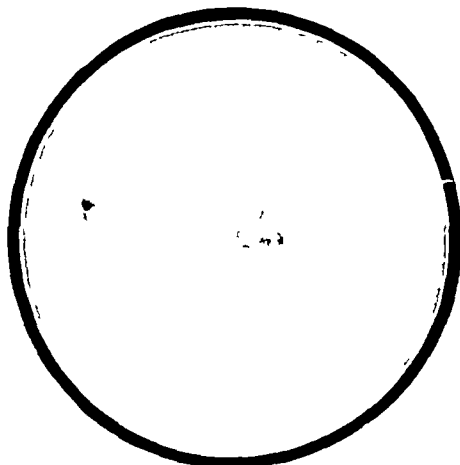


Fig. 6—Platelet (secondary anemia) containing a ring body

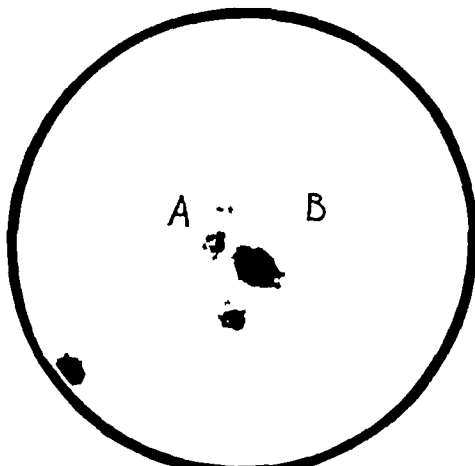


Fig. 3—Platelets in pernicious anemia. One (A) has a projection suggesting a pseudopod. Another has an intensely stained central portion (nucleus?). A third is superimposed on a red cell. B represents a red cell, microcyte. (x 2,000)

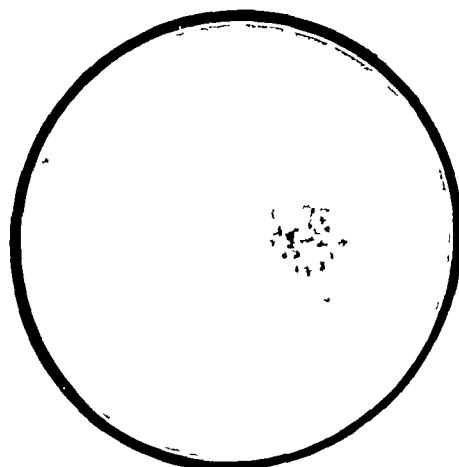


Fig. 7—Platelet showing "buds" and chromatin granules arranged in rings (case of secondary anemia). (x 2000)

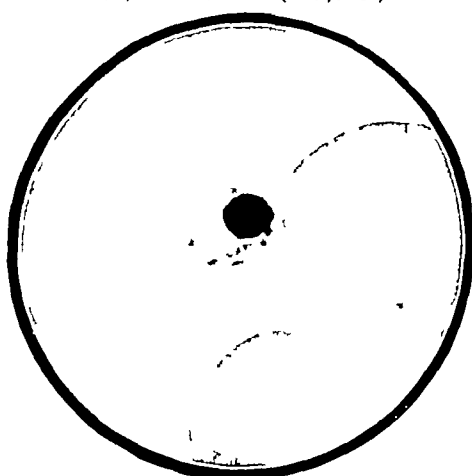


Fig. 4—From a case of splenic anemia. A blood plate containing a deeply stained chromatin body of large size (nucleus?) and many smaller bodies similarly stained. Under the microscope a granular structure was apparent in the deeply stained (nuclear?) body

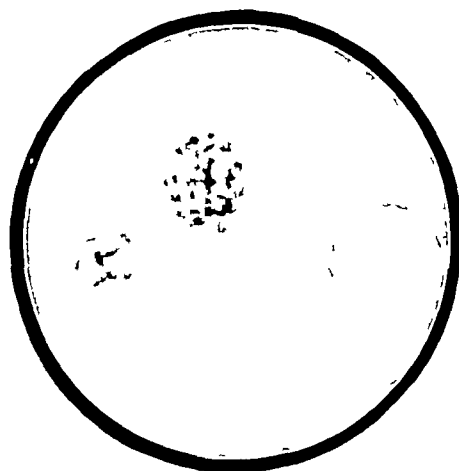


Fig. 8—Two platelets, one nearly as large as a red cell and showing chromatin granules scattered over the whole surface. In the photograph this cell resembles a stippled erythrocyte, but in the original there is no such resemblance

NOTE ON THE MORPHOLOGY OF BLOOD PLATES

MARY W. ROWLEY, M.D.

BOSTON

Blood plates are usually described as from one to three microns in diameter. The accompanying photographs* demonstrate that they are often much larger than this, with a good deal that suggests cell-structure.

The blood in which the platelets here reproduced were found was from three cases, one of pernicious anemia, one of splenic anemia and one of severe secondary anemia. Using a modification of Wright's method of staining I have obtained similar plates in cases of malaria, myelogenous leukemia and in normal blood. With this stain the definite, usually rounded outline of the periphery is distinctly shown. In most of the figures hitherto published the edges of the plates are jagged and irregular.

Why are these plates so much larger than those usually described and pictured? Their size is probably due in part to squashing, as there are more large ones near the thin edge of the blood-smear where the leucocytes are also larger. But I believe that another reason is that with ordinary technic only the central deep-stained portion (Fig 1) is visible at all. The periphery remains unstained and so invisible except when the platelet lies on a red cell. Then the periphery (with ordinary "Romanowsky" stain) usually appears colorless against the pink or yellow of the red cell (Fig 2 shows a plate lying partly on a red cell with this periphery stained). I believe that with a suitable staining method plates similar to those here figured can be found in all or nearly all blood, normal and pathologic. I am now trying to work out such a staining method.

All of these specimens have been studied by Dr. Richard C. Cabot, who authorizes me to say that he entertains no doubt that the figures here shown are genuine blood-plates.

I am very much indebted to Dr. Cabot for assistance and encouragement given me by him in studying the blood-plates above described.

THE EARLY DIAGNOSIS AND RADICAL CURE OF CARCINOMA OF THE PROSTATE

A STUDY OF FIFTY CASES AND PRESENTATION OF A RADICAL OPERATION **

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BALTIMORE

In the October number of the *Johns Hopkins Hospital Bulletin* I described briefly an operation for the radical cure of carcinoma of the prostate based on a study of forty cases.¹ Since then I have had ten additional cases. In the paper referred to I discussed first six cases which were seen early in the disease, in which a diagnosis of benign hypertrophy was incorrectly made and a partial operation therefore performed (Bottini operation 4, suprapubic prostatectomy, 1, perineal prostatectomy, 1). All these patients subsequently returned with unmistakable evidence of cancer and only one is alive to-

day. A study of the pathology of these cases, along with the symptomatology and clinical findings, showed that all presented certain features which may now be taken as suggestive of cancer. A study of thirty cases without operation and eight autopsies showed that cancer of the prostate may begin as a small indurated nodule in one or both lobes of an otherwise benign hypertrophy, that it remains confined for a long time within the stout capsule of the prostate, that its line of invasion is upward along the course of the vasa deferentia and seminal vesicles, and not usually into the bladder around the prostatic orifice, and that the inferior surface of the trigone is usually the first portion of the bladder to become involved.

It thus became evident that if a radical cure was to be attempted the line of excision would have to include the entire prostate, with its capsule and urethra, the adjacent portion of the bladder, particularly of the trigone, the seminal vesicles and the ampullae of the vasa deferentia.

During the course of a year four cases apparently favorable for such a procedure presented themselves, and the operation above indicated was carried out with little difficulty, slight operative shock and a very satisfactory convalescence in three cases, the histories were reported in detail. During the last six months ten patients with carcinoma of the prostate presented themselves, all beyond operative relief but one, and he would not submit to it. In one case, which seemed fairly favorable, the patient was operated on, but died, and autopsy showed extensive involvement of the pelvic peritoneum. In all of these cases the patients had been treated for a long time by their family physicians, and in several instances by skillful surgeons, and the character of the disease was not recognized. Had it been possible to get these cases earlier I believe the radical operation which I have proposed as a routine procedure for all favorable cases of cancer of the prostate would have resulted in cure.

DIAGNOSIS

The early diagnosis of cancer of the prostate is not easy. I am free to confess that I have failed in at least six cases, and until confronted by their subsequent development never suspected the malignant nature of the disease. A study of the fifty cases which I have now had has brought out the following facts:

Symptomatology—Cancer of the prostate may occur at any age after fifty years, 57 per cent of the patients being between sixty and seventy years of age, the youngest in my series being fifty-three. The first symptoms in most cases were similar to those of benign prostatic hypertrophy, viz, slight difficulty and frequency of urination, but in about 30 per cent of the cases pain was present—an unusual symptom in cases of prostatic hypertrophy. Hematuria occurred only four times as an early symptom, and in only about 20 per cent of the cases was it subsequently present, in only a few cases as a prominent symptom, and these cases showed cystoscopically considerable intravesical tumor outgrowth generally of a villous type. In a few instances the prostatic trouble ran a long course, having been present twenty years in one instance, but in these cases the disease probably became malignant many years after its onset. As a rule there has been a more rapid increase in the severity of obstructive symptoms than in benign cases, leading to an early large residual urine. In some cases however, there has been little residuum and the bladder has been contracted.

Pain has been a prominent symptom, often entirely

* Photographs by Louis S. Brown of the Massachusetts General Hospital.

** Read before the Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 14, 1905.

¹ To appear in full in the *Johns Hopkins Hospital Reports*, a volume entitled *Studies in Urinary Surgery*.

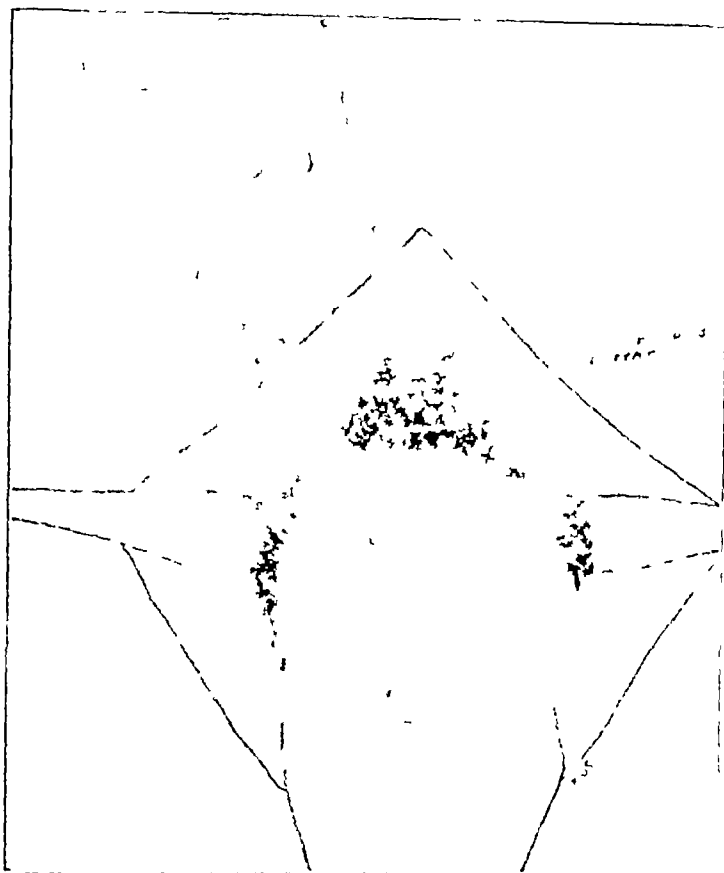


Fig 1—Membranous urethra and puboprostatic ligaments divided prostate freed from surrounding adhesions

out of proportion to the extent of the disease and the obstruction present. It generally appeared as a dull pain in the suprapubic region which became worse as the bladder became full. During urination in about 25 per cent of the cases there was pain in the urethra often referred to the end of the penis but sometimes limited to the deep urethra or perineum. Pain in the rectum has been present in only 10 per cent of the cases and seems to have no relationship to the extent of the involvement

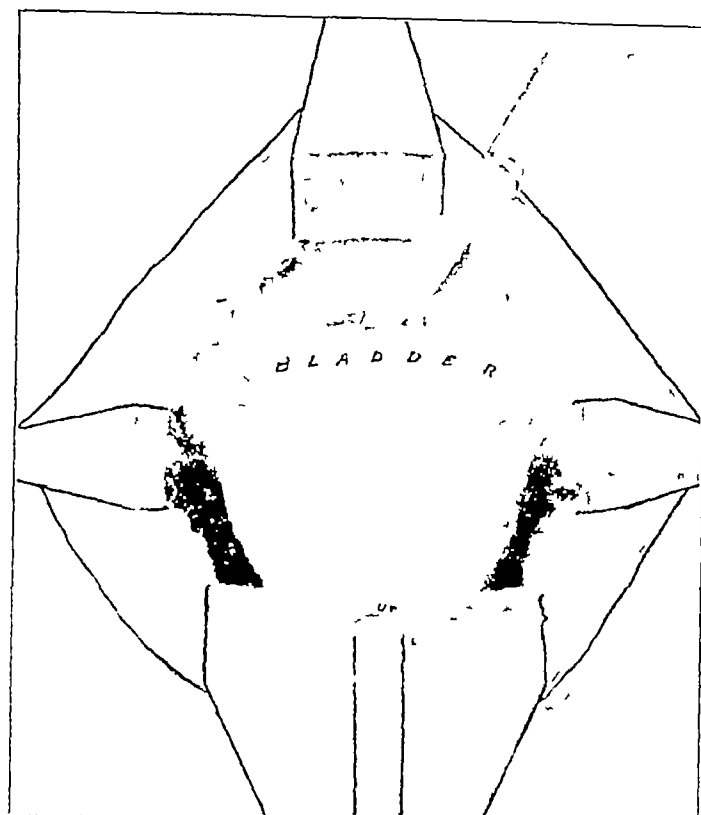


Fig 3—Prostate drawn downward exposing anterior surface of the bladder which is incised by scalpel

in the pelvis, being noticeably absent in a number of cases of extensive prostatic carcinoma. The same may be said for pain in the lower extremities, hips, thighs buttocks and along the sciatic nerves, it has been present in cases of slight degree and absent in others of considerable involvement. When present, however, pain in the rectum and lower extremities is a very suspicious symptom and should strongly suggest malignancy. Loss of weight has been a prominent symptom,

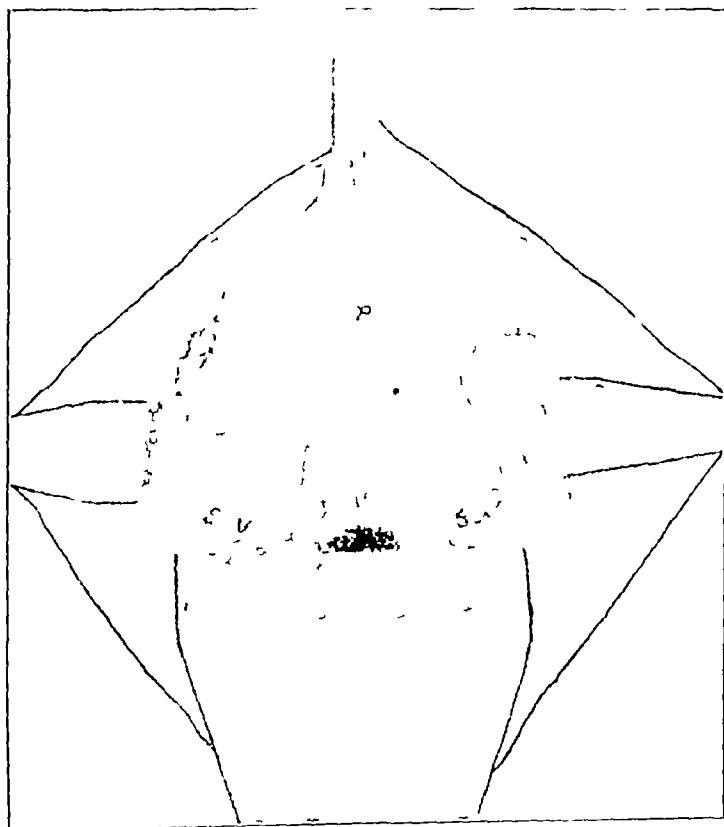


Fig 2—Freeing the posterior surface of seminal vesicles Prostate drawn well out of wound

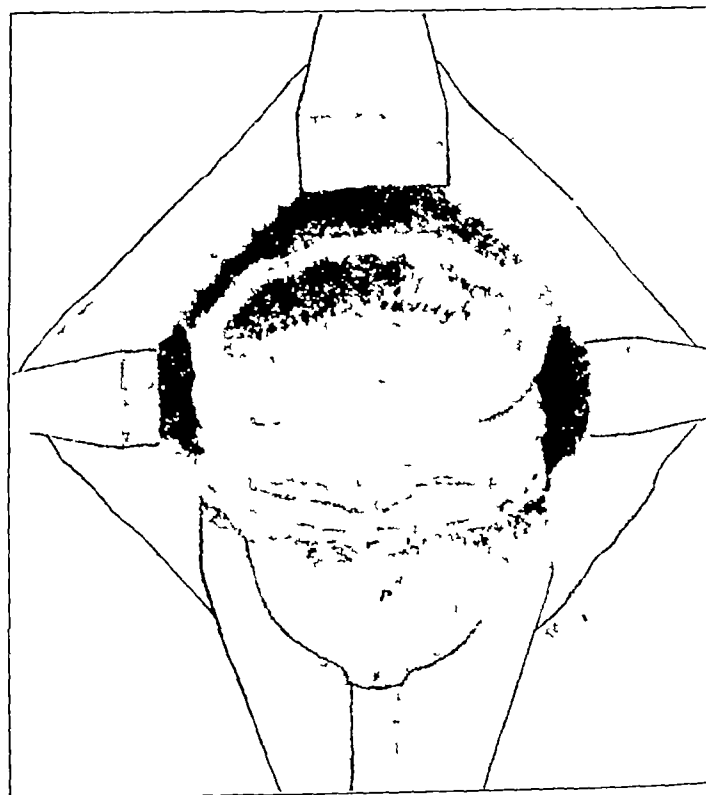


Fig 4—Excision of vesical cuff carried as far as trigone Dotted line shows site of division through trigone

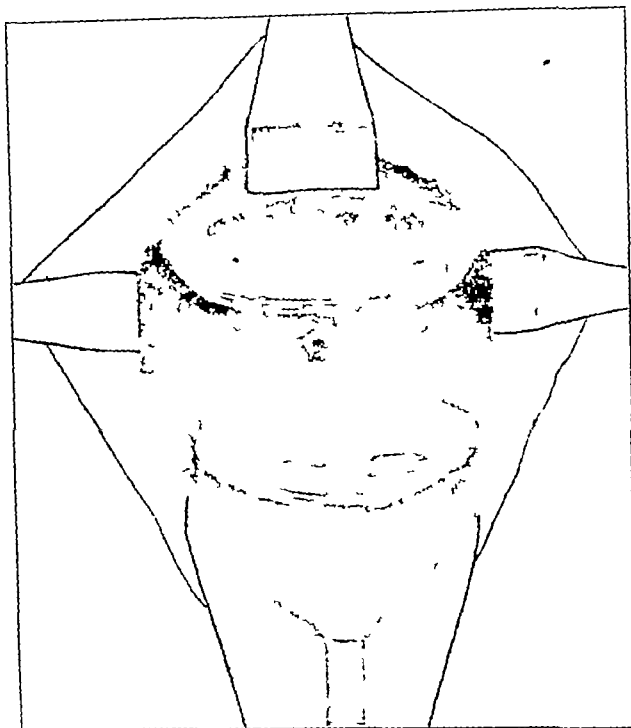


Fig 5—Trigone divided. Seminal vesicles and vasa deferentia exposed preparatory to division of vasa

often occurring early in the disease and being much more pronounced than in cases of simple hypertrophy

Clinical Findings—The prostate was considerably enlarged in about 70 per cent of the cases, but many of these patients were seen late. When the disease is still confined to the limits of the prostate proper this organ has generally been found only moderately enlarged. In such cases portions of the prostate in a few instances have been soft, but marked induration, generally involving almost all of the prostate, has been found in nearly all the cases. The surface of the prostate was smooth in most instances and only rarely rough or nodular until late in the disease.

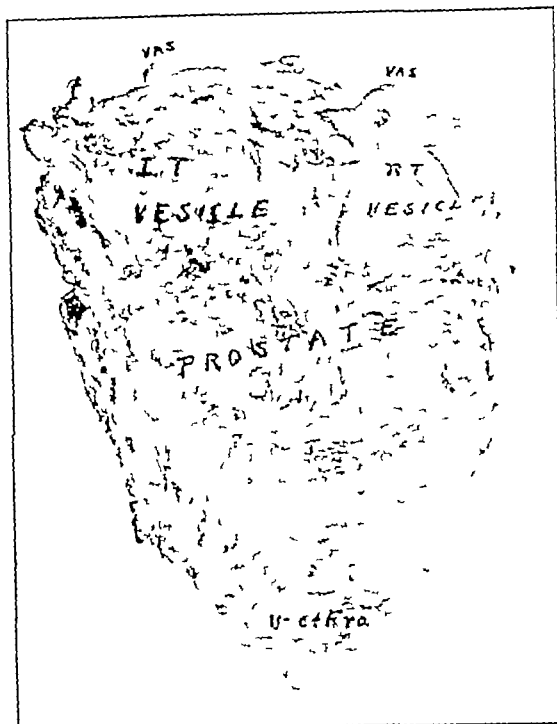


Fig 7—Posterior view of specimen in Figure 6

In one early case there was a small prominent rounded induration at the apex of the prostate involving also the membranous urethra. In later cases the region of the seminal vesicles has shown induration, and often a characteristic hard plateau extending across the inters vesicular space from one vesicle to the other and presenting a concave sharply defined upper border to the finger has been present. Study of pathologic specimens has shown this is to be composed of a cancerous invasion of the vasa deferentia and the tissues between them and the trigone. An unusual thickness in the retrourethral portion of the

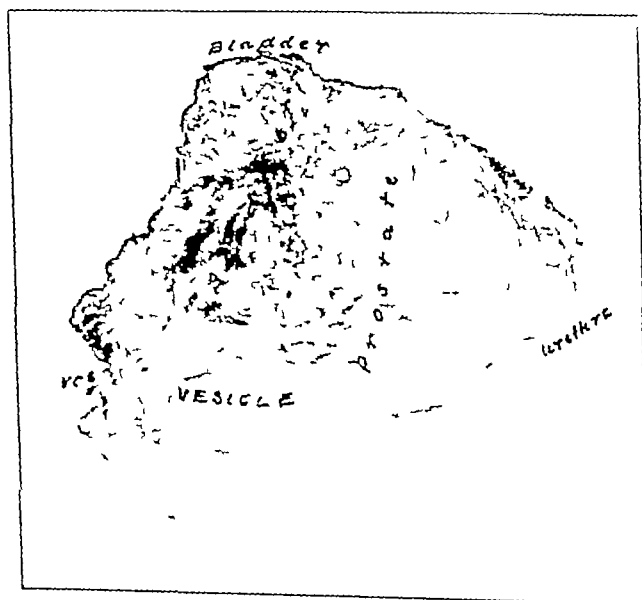


Fig 6—Specimen removed side view

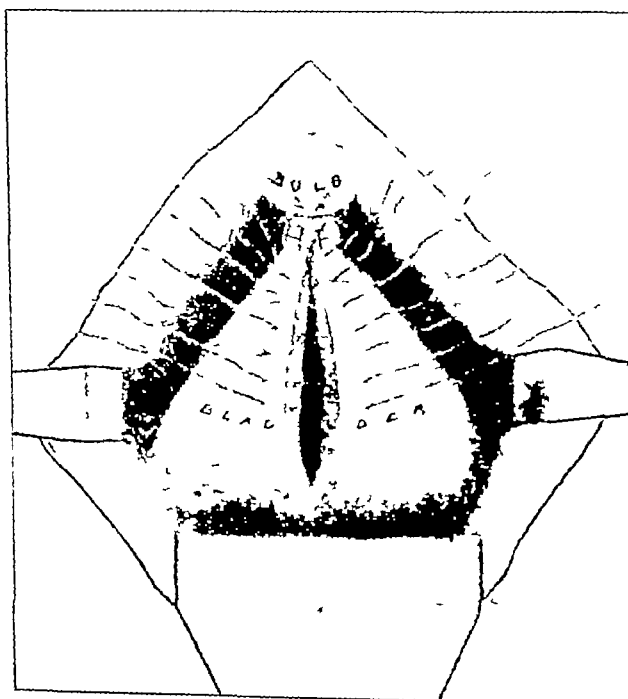


Fig 8—The anterior part of the vesical opening has been anastomosed to stump of membranous urethra remainder being closed by interrupted sutures

prostate (the posterior commissure) as shown by an instrument in the urethra and a finger in the rectum, was nearly always present. Enlarged pelvic lymphatic glands have been found in only a small number of even the more advanced cases, and as they are occasionally present with ordinary prostatitis their presence or absence is of little diagnostic or prognostic value unless they are a prominent feature. A remarkable characteristic of cancer of the prostate is that metastases directly to the osseous system occur more often than to the glands.

The cystoscope has been of the greatest assistance in the diagnosis in early cases, as it has shown a distinct and radical difference in the intravesical picture from that seen in cases of benign hypertrophy. In the latter one usually sees two or three rounded intravesical lobes with deep sulci between and a pronounced *bas fond* behind them. In most early cases of carcinoma of the prostate practically no intravesical enlargement could be seen, and the entire absence of deep intervening clefts has been a constant finding in even the great majority of the advanced cases. Except in those rare cases in

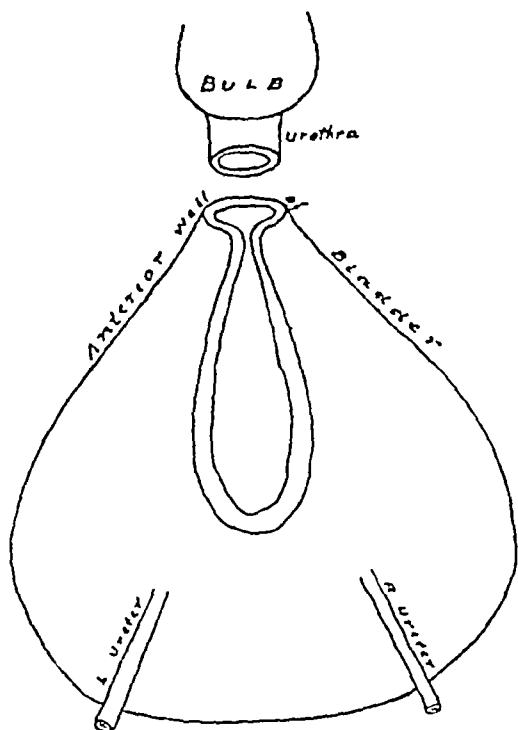


Fig. 9.—Diagram showing plan of vesico urethral anastomosis

which intravesical tumors were present, if any intravesical prostatic enlargement were visible it was generally only a slight enlargement of the median portion. A picture of diagnostic importance is an elevation and puckering of the mucous membrane of the anterior portion of the trigone—due, as I have found, to the intervesicular mass of disease involving the trigone and leading to its contracture. Ulceration and intravesical tumor formation has been very rare in this region and then only very late in the disease.

Before withdrawing the cystoscope I have always inserted a finger into the rectum, and the finding in malignant cases has nearly always been entirely different from that in benign cases. There has always been a much greater thickness in the retrourethral portion of the prostate, the median portion being especially thick and the consistence very hard. In later cases, in which the disease has passed above the prostate into the retrotrigonal area, it has been impossible to feel the beak of the instrument in the bladder.

Early diagnosis then may be based on a suggestive history (rapidity of growth and pain), an indurated prostate, a strictured condition of the prostatic urethra near

its apex, and the absence of intravesical lobes as shown with the cystoscope. All these conditions are rarely present together, but generally enough are discernible to make the diagnosis clear. An induration of the prostate, coming on without recent prostatitis, without catheterism or an infected bladder, in a man past fifty, with symptoms of urinary obstruction, and particularly with pain, should make the physician suspect cancer at once, and a perineal operation should be undertaken to settle the diagnosis. If residual urine in considerable amount is present without the presence of intravesical lobes, as shown by the cystoscope, the suspicion may be considered strengthened. If one is unable, however, to be certain the prostate can be exposed, as for ordinary prostatectomy, and then by inspection and palpation the diagnosis can be made certain in most cases. In some instances I have been uncertain, and have then made bilateral capsular incisions and excised small portions of the lateral lobes for microscopic study. In two cases it was shown that the irregular induration was due to seed calculi of the prostate gland and in two other cases it was necessary to have frozen sections prepared before I could be certain of the nature of the disease. With a surgical pathologic laboratory adjacent it has been possible to get a nicely stained section for microscopic study in six minutes, and I have considered this worth waiting for in several instances. I have proposed, therefore, to follow the procedures above described in all suspicious cases, and repeat that those cases in which there are areas of stony induration, with pain as a prominent symptom, and little intravesical prostatic enlargement, may be considered very suspicious.

RADICAL OPERATIONS

As above stated, operations and autopsies have demonstrated that the entire prostate with its capsule and urethra, the seminal vesicles, the ampullae of the vasa deferentia and the superjacent portion of the vesical trigone, must be excised in one piece if radical cures are to be expected.

A study of the literature of cancer of the prostate shows that this operation has not been done before for the disease. I have excluded the case of Kuster, who removed the entire bladder and transplanted the ureter into the rectum, and the case of Harris, who excised most of the bladder with the prostate (seminal vesicles not mentioned) and transplanted the ureters into the vertex of the bladder. Both of these were suprapubic operations and the patients lived five days and five months respectively. Two cases reported by Demarquay and that of Czerny, in which the anterior wall of the rectum was excised, have also been excluded.

The operation which I have carried out in six cases as a routine procedure for cancer of the prostate is described as follows in the history of one of the cases.

Operation.—An inverted V cutaneous incision was made in the perineum as in the operation employed by me for simple hypertrophy of the prostate, each branch of the incision being about two inches long. By blunt dissection the end of the bulb and central tendon were exposed, and the latter divided, exposing, in turn, the recto urethralis muscle, the division of which gave free access to the membranous urethra behind the triangular ligament. Urethrotomy on a grooved staff was followed by introduction of the prostatic tractor, which was opened out after it reached the bladder. While traction was made on this instrument the rectum was carefully separated from the prostatic capsule by blunt dissection until the entire posterior surface of the prostate was brought into view. Up to this point the operator proceeded exactly as in the usual prostatectomy operation. The tissues around the prostate were more hemorrhagic and the wall of the rectum more

closely adherent to the capsule of the prostate than usual. Examination of the prostate showed much greater induration than I have ever encountered in the benign prostate. The rectum and periprostatic tissues were free from invasion, and complete excision was, therefore, decided on and carried out as follows. The handle of the tractor was depressed, thus exposing the membranous urethra anterior to it at a point where it was easily divided transversely with a scalpel, leaving a small stump of the membranous urethra protruding from the surface of the triangular ligament. By further depressing the handle of the tractor the pubo-prostatic ligament was exposed and, being very tautly drawn, was easily divided by scissors, thus completely severing the prostate from all important attachments, except posteriorly (Fig 1). The lateral attachments, which are slight, were easily separated by the finger. During these manipulations a moderate amount of hemorrhage was encountered (coming from the periprostatic veins, particularly those just behind the triangular ligament in front of the prostate), but it was easily controlled by clamping several bleeding points and applying pressure with gauze by means of an anterior deep retractor (Fig 3).

The posterior surfaces of the seminal vesicles were then freed by blunt dissection, the now mobile prostate being well out of the wound, as shown in Fig 2. In this exposure of the posterior surface of the vesicles I was careful not to break through the fascia of Denonvilliers which covers not only the posterior surface of the prostate, but also that of the seminal vesicles, and forms, I believe, an important barrier to the backward growth of the disease. The next step was to expose the anterior surface of the bladder, which was easily done by depressing the tractor and making strong traction. By this procedure the bladder was drawn down close to the skin wound that it was easily incised at a point in the middle line about 1 cm. behind the prostatovesical juncture (Fig 3).

By means of scissors the division was continued on each side until the trigone was exposed (Fig 4). After swabbing away the blood and urine, the ureters were easily found and the line of incision carried across the trigone with a scalpel so as to pass about 1 cm. in front of the ureteral orifices. While still making traction on the prostate, the base of the bladder was pushed upward with the handle of the scalpel thus exposing the anterior surface of the seminal vesicles and the adjacent vasa deferentia (Fig 5), all of which were carefully freed by blunt dissection with the finger as high up as possible so as to remove with the vesicles much circumjacent fat and areolar tissues on account of the lymphatics which they contained. The vasa deferentia, after being drawn well down, were picked up on a small blunt hook and divided with scissors as high up as possible, care being taken to see that the ureters were not in danger. After division of the vasa, the seminal vesicles were found to come down more readily, the deep adhesions were finally divided, and the mass shown in Figs 6 and 7 was removed. As seen here in the side view, a portion of the membranous urethra, the entire prostate with its capsule intact the seminal vesicles 4 cm. of the vasa deferentia, and a cuff of the bladder 1 cm. wide along the anterior and lateral surfaces and 2 cm. wide in the region of the trigone has been removed in one piece.

There now remained a large defect to repair. The vesical opening was about 8 cm. in diameter and had sunk far back in the depths. The stump of the membranous urethra had been obliterated by the compression of the anterior retractor so that it was necessary to insert a soft rubber catheter through the urethra from the meatus to discover it. The anterior wall of the vesical opening was then caught with forceps and I was surprised to find how easily it could be drawn down to the membranous urethra, where an anastomosis was readily made as shown in Figs 8 and 9. The first suture was placed by inserting the needle into the triangular ligament above the urethra and bringing it out through the anterior wall of the membranous urethra then through the anterior wall of the bladder in the median line from within out, care being taken to include only the submucosa and muscle. When this suture was tied the median line of the anterior wall of the bladder was drawn to meet the median line of the roof of the remaining membranous urethra the knot was outside, and the thread was left long.

Lateral sutures similarly placed (including the periurethral muscular structures below) and two posterior sutures completed the anastomosis of the membranous urethra with a small ring into which the anterior portion of the margin of the vesical wound had been fashioned by the tying of the sutures, as shown in Figs 8 and 9. The remainder of the vesical wound now presented a longitudinal opening which was easily closed by sutures (Fig 8), thus completely closing the defect and replacing the prostatic urethra with a funnel shaped process made by the bladder wall. The sutures used were silk, one end of each being left long and brought out of the wound so that they could be extracted later (since then I have found alternate sutures of catgut and silkworm gut, also left long, the best). After light gauze packing had been placed in various portions of the wound, the levator ani muscles were drawn together with catgut (two sutures) in front of the rectum and the skin wound closed on each side with interrupted catgut sutures, leaving only a small portion open at the angle in front for exit of the gauze drainage. The rubber catheter (which was of considerable service in making the anastomosis of the urethra and bladder) was fastened in place by adhesive plaster around the penis, and the patient was returned to the ward. During the operation he received 1,000 cc. salt solution infusion beneath the breast, and his condition throughout was good, the pulse varying from 62 to 92 and being 80 at the end of the operation, which required two hours.

Examination of Tumor—A study of the specimen removed showed adenocarcinoma involving the entire prostate, the region between the seminal vesicles and the inferior surface of the excised trigone and the vasa deferentia. The capsule of the prostate and the bladder at the upper limit of the excision were free.

Convalescence—The patient made a good recovery. The perineal wound healed tight, there was no difficulty in urination, he was able to hold urine for three or four hours at night, there was incontinence during the day.

REMARKS ON OPERATION

As remarked above, this radical operation has been performed on six patients with one operative death. The autopsy in this case showed extensive intraperitoneal metastases and explained the cause of death. Two patients have died since the operation, one a year later from an operation for vesical calculi. Autopsy showed a small carcinomatous mass about the size of a pea adjacent to the left vas deferens. This was the only cancerous tissue found, no metastatic glands or osseous metastases were made out. The recurrence had been predicted in this case after a study of the operative specimen which showed carcinoma near the upper end of the left seminal vesicle.

The other patient died of nephritis two months after the operation. Autopsy showed that the cancer had been thoroughly extirpated, a careful search failing to reveal any malignant disease, regional or metastatic. Numerous sections were made of the pelvic tissues. It therefore seemed evident that had the man lived he would have remained cured of the cancer.

Three patients are living and well—one ten months, one eight months and one one month after the operation. One patient has control over his urine and can hold it several hours, one has incontinence in the day, but perfect control at night, the third is still in the hospital. All have been completely relieved of the severe pain from which they suffered before operation. None of my cases were particularly early ones. With an early diagnosis and operation the operative mortality should be nil as only the patient with extensive (unrecognized) peritoneal metastases showed any shock.

CONCLUSION

Cancer of the prostate is quite a common disease, about one case in seven of prostatic enlargements in men

past fifty being cancerous. It is characterized by induration—often of stony hardness, and pain is frequently present. The early diagnosis may be made when there is marked induration, and the absence of the usual intravesically projecting lobes, as shown by the cystoscope, (the prostatic orifice often appears normal). The disease is often of slow growth and remains for a long time confined within the limits of the firm prostatic capsule. The operation carried out by me in six cases is necessary if a cure is to be expected—it is not difficult of performance and furnishes remarkably satisfactory functional results. With early diagnosis the mortality should be nil and the percentage of cures large. The general practitioner should suspect every indurated enlarged prostate and the patient should be urged to submit to a perineal operation when if the disease is proved to be malignant the radical operation can be done.

THE TREATMENT OF ANEURISM BY DIRECT, GRADUAL ARTERIAL CLOSURE

REPORT ON THE APPLICATION OF THE METHOD TO A CASE OF ANEURISM OF THE ABDOMINAL AORTA *

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RATIONALE OF TREATMENT

The main basis for the suggestion of gradual arterial closure as a probable means of relief for certain cases of aneurism lies in three facts observed in human pathology and surgical experience.

1 Gradual closure of a large blood vessel as from the pressure of a growing tumor, so far as such pressure is concerned, is not associated with depression of vital functions nor with nutritional or other disturbances within the area of its distribution. The anastomotic current is so gradually and perfectly established that the entire absence of symptoms due to circulatory disturbances may fail even to suggest the occlusion of a large blood vessel.

2 In the larger proportion of those exceptional cases of aneurism in which a spontaneous cure occurs this results from the deposition of the laminated coagulum or so-called active clot, on the walls of the sac, and is caused by the slowing and not the complete stoppage of the blood current in the vessel (Ashurst). It may result from any accidental cause, such as the pressure of an enlarging tumor on the artery on the proximal side of the seat of disease.

3 Aside from the radical surgical procedures which undertake, where indicated, the complete exclusion of excision of the sac or its obliteration by arteriozaphy, the best results in the surgical treatment of this disease, have come from methods which aim at the slowing of the blood stream through the sac, and the production of an active clot—as, for instance, in the Hunterian ligation—rather than the sudden and complete cessation of the blood flow and the production of coagulation *en masse*. Methods which cause the formation of the passive clot at best are only followed because anatomic and other local conditions prevent the adoption of procedures designed to secure the deposition of the stratified coagulum.

These three basal propositions and the principles underlying them have long been recognized. While brilliant results in many cases of aneurism, especially those involving the arteries of the extremities, have followed

the radical procedures referred to and which are not based on these principles, yet unfortunately, the proportion of those not amenable to this form of surgical treatment is large. The usual age of patients afflicted with the disease, their depressed local and general vitality, associated organic disease, the anatomic site of the aneurism, are factors which all too frequently demand the adoption of some less radical, even if less hopeful, method.

It is not to be contended that the very gradual arterial closure induced by certain pathologic processes can be reproduced by surgical means, but it is evident that the more closely these can be approximated, within reasonable limits, by the surgeon, the better will be his results both in the avoidance of risks of sudden closure and the certainty of cure by the formation of an active coagulum.

In this connection it will be of interest to refer again to cases of spontaneous cure by accidental slowing of the blood stream. Recoveries from this cause may result in the entire obliteration of the sac, the circulation being carried on by means of collateral vessels, or

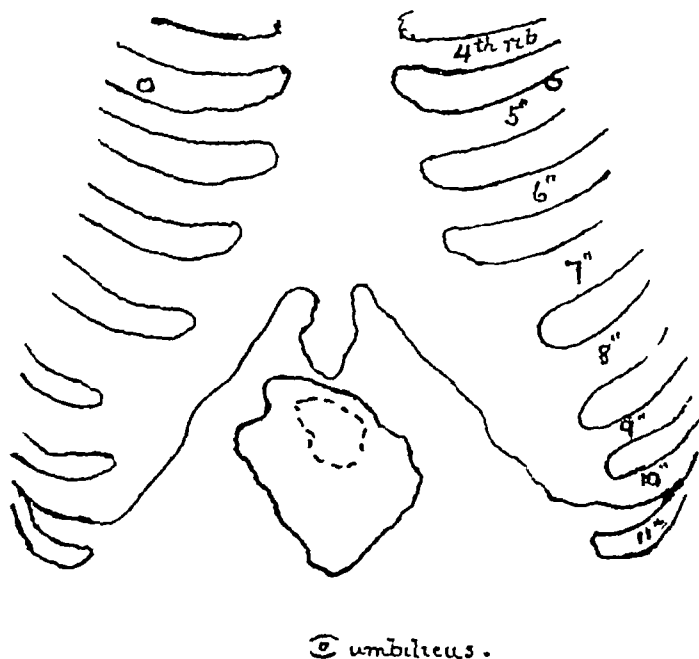


Fig 1—Reproduction from a tracing of outlines marked on the patient's thorax and abdomen. Dotted line indicates area of aneurismal pulsation detected by light palpation, solid line, limits of aneurismal pulsation outlined by moderately deep palpation.

a narrow channel may be left running through the tumor through which the circulation may be maintained. The recognition of the possibility of cure by the latter means is of great importance in relation to the successful treatment of aneurisms from the sac of which, or from their immediate neighborhood, arteries originate supplying vital organs and which have only very meager collateral circulatory channels. Thus, in an aneurism of the abdominal aorta from which arises the celiac axis, it is manifestly impossible to adopt any radical method of cure, and what degree of relief is ever obtained must be secured, it would seem, without the sacrifice of the lumen of this branch, for the reason that its subdivisions supply the stomach, spleen and liver and have only the slightest and most indirect collateral circulatory channels. It is thus evident that in such a case the method of cure must aim at the avoidance of the complete obliteration of the sac and the process of clot formation must be carried, if possible, only so far as to stop expansile pulsation, and to leave permanent channels through the sac, maintaining the patency of the larger arterial branches arising from the wall of the

* Read before the Alameda County (Cal.) Med. Assoc.

aneurism In the nature of things, in these cases, the best that can be attempted is the obliteration of only such portions of the sacculatation as lie without the line of the main channel and of the blood currents to these branches, in some parts of the sac the process

active coagulum, however, will tend strongly, I believe, to remove this from the sphere of the imagination, and to show that in gradual and incomplete arterial closure lies the probable means of its attainment To this, pathology and surgical experience lend strong reinforcement

THE SLOWED BLOOD CURRENT

Passing by the chemical and histologic truths concerned in the process of thrombosis as well as the several etiologic agencies not directly related to the production of the form of coagulum on which our present interest centers, I will consider chiefly the one factor most directly related to the formation of the stratified or mixed clot, viz, the slowed blood current Although personal conjecture is associated with the statement of well-observed conditions, we shall later have an opportunity of seeing how far it is supported by recognized pathologic truths

In the absence of other determining conditions, the formation of this coagulum begins first where the force of the blood stream is most reduced, at the margins of the eddies and pools in those portions of the sacculatation least directly in the line of the main blood current Here the blood platelets, the leucocytes, the fibrin and perhaps, the aggregation of a few red corpuscles produce a white thrombus For reasons which do not plainly appear, but most likely lie in various temporary conditions affecting the force and direction of the blood stream in the sac, this clot does not at once assume the form of a considerable mass, but is deposited layer on layer, more or less irregular in size and form and thickness Blood oozing in between these layers stagnates locally and coagulates *en masse*, producing together with the layers of white thrombus the stratified, or mixed, clot

The nature of this form of coagulum, as well as its method of production, is quite well understood, but the extent to which its formation may be carried and the conditions influencing its form and size are not so easily discovered Obviously, however, it would seem that the extent to which this process goes on is governed by the degree to which the blood stream is slowed Thus, if the current is gradually and continuously reduced, the clot formation will advance with the slowing stream, gradually extending from the periphery into the central portion of the sac until, if the current is all but stopped, the entire sac is filled in this stratified way If, however, the force of the stream is not so much slowed, the clot formation will advance only so far into the more actively moving portions of the current as the force of the stream will permit the deposition of the histologic elements and the carrying on of the chemical processes incident to clot production In other words, when the advancing clot meets a too forcible blood current the process is stayed If the current be still further reduced, the process will advance

If this correctly represents the relation of the extent and form of active clot formation to the main current through the aneurism, it would seem that it explains as well its relation to secondary currents to the larger arterial branches arising from the sac The law of hydrostatics, that pressure on a confined fluid mass is equally distributed in all directions, would be an important factor in maintaining their patency, tending as it would to make the force of the flow equal toward the lesser and greater channels and thereby exerting the same repressive influence on clot production threatening to encroach on them The subsequent usual contraction of the clot would tend to maintain still further their

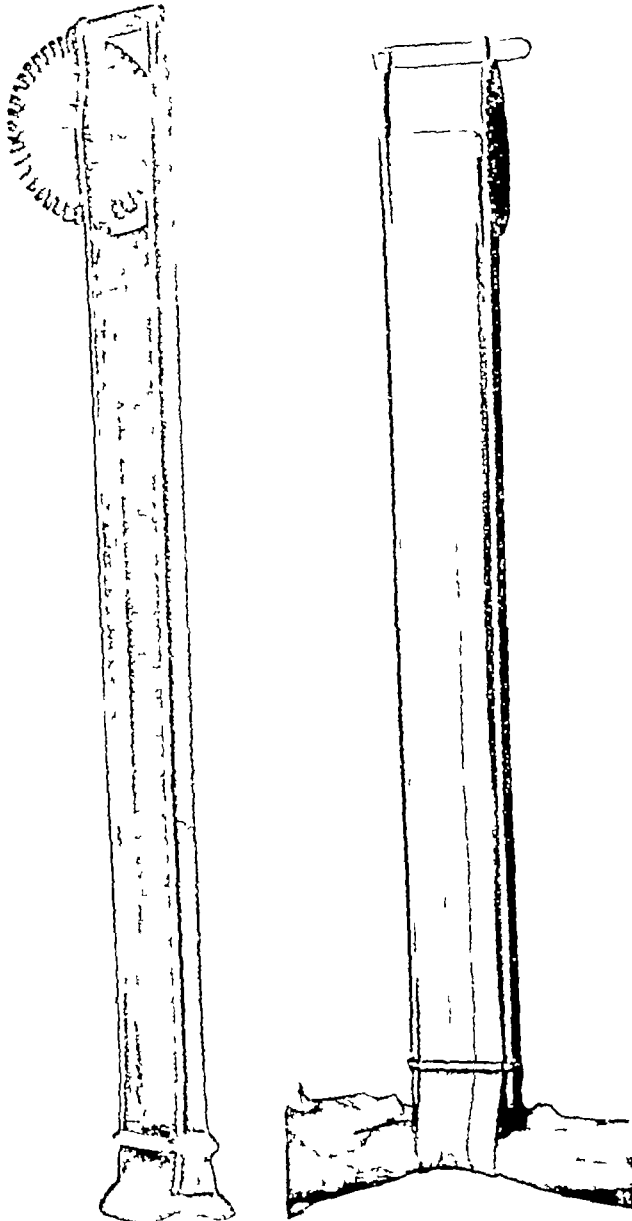


Fig 2.—Constrictor actual size. All parts are made of silver except the extremity placed in contact with the artery which is made of hard rubber Its free borders are rounded so as to reduce traumatism to a minimum The transverse bars near this end are made as rollers to facilitate movements of the tape The windlass permits the regulation of the degree of pressure on the artery and the bar lock fixes the windlass at any desired point.

Fig 3.—Constrictor with tape applied to section of human abdominal aorta actual size The lumen of the vessel is nearly closed Note rolling out of margin of tape The tape is removed by cutting one side as deeply as possible in the wound with angular scissors then turning the wheel at the same time fixing the instrument

may only result in the strengthening of its walls It may seem fanciful to think this a possibility or to ascribe to any artificial method such selective properties as the accomplishment of this demands A short review of the process of the formation and deposition of the

lumen. Thus it would seem *a priori*, that it is possible to carry on clot formation through control of the current to the extent of completely obliterating the sac or filling a large portion of it and leaving sufficient channels to maintain the circulation not only through the principal vessel, but through its larger branches as well.

Let us see if we can secure any support to this position from pathologic observation. The so-called antemortem heart clot resulting when for any reason the heart's action is considerably retarded does not ordinarily form in such parts of the organ as are most directly exposed to the main blood current—the center of the cavities or the valvular openings—but, if in the auricles they form usually in the auricular appendices; if in the ventricles in the intertricular spaces where the current is least forcible. If thrombosis occurs in a vein it usually begins first in the pockets of the valves where the current is slowest. So much for the general location for the beginning of clot formation.

Can the further study of this condition throw any light on the influences governing the extent to which it may be carried? The presence of the large so-called postmortem heart clot partly decolorized partly red occupying the heart cavities, perhaps extending through the auriculo-ventricular openings into the vessels has been observed by each one of us. No one doubts that its presence in those localities ordinarily the site of a fast-moving stream is due to the very feebly flowing blood current incident to death or the complete stagnation immediately following. Why then in cases of pronounced antemortem white thrombus formed while there is still considerable force to the blood stream, is it not found in those localities and why its periphery ordinarily limited to a point not far beyond the line of the most direct and forcible blood flow? Is it not due to the repressive influence of the more actively moving current beyond the limits of which it can not advance? Will not the same thing explain the fact that after ligation of an artery the coagulum extends to the first collateral branch while in a vein with its lower blood pressure a clot once beginning to form may extend indefinitely even to the heart?

Does not the occasional cure of an aneurism by accidental events wherein is found a channel, perhaps only a narrow one running through the aneurismal mass and through which the circulation is continued, tend strongly to prove the same thing? To be sure, clot formation in the sac may partially break down after its complete filling, and tunneling may result with its permanent channel formation, but, on the other hand it does not seem to be forcing matters to regard the channel as frequently the result of the continuance of a force to the blood stream of sufficient degree to prohibit the advance of the clot to the extent of entirely obliterating the cavity of the sac. Finally, my personal experience with the case of aneurism presently to be described wherein the function of organs whose blood supply came through arterial branches having their origin in the sac was not apparently interfered with although clot formation had advanced so far that appreciable expansile pulsation and thrill had ceased, tends strongly to confirm the position taken that the process of coagulation can be thus controlled.

THE TREATMENT DEMONSTRATED

If the principles on which rest the suggestion of the cure in certain cases of this disease by gradual closure of the artery are sound, it only remains to demonstrate

a practical method. Two questions, especially, in this relation demand an answer.

1 Can such a procedure be followed and infection avoided?

2 Can the prolonged direct pressure necessary to induce gradual closure be made on the arterial wall without serious damage to its tunics or to adjacent structures?

In reply to the first question it may be stated that the open wound maintained patent for a number of days, perhaps involving the peritoneal cavity and requiring occasional exposure, is a matter to be seriously considered. Yet I believe that no one to-day will affirm that in a patient capable of co-operating with the surgeon, modern aseptic and antiseptic technic scrupulously followed not only at the original operation, but throughout each subsequent treatment, is unable sufficiently to guarantee a reasonable degree of safety concerning the avoidance of infection.

As to the second question, the experience of Crile in temporary direct closure of the carotid arteries in operations on the head and neck, the experiments of Keen in temporary complete closure of the abdominal aorta in dogs, and my own series of experiments on dogs to ascertain the feasibility of gradual closure of the abdominal aorta and the effects of prolonged moderate pressure on it¹ go a long way toward proving that at least in healthy arteries, it is possible to maintain a reasonable degree of direct pressure for a considerable period of time without seriously endangering their integrity.

As a further proof I desire to present the following case wherein direct pressure was applied continuously to the upper portion of the human abdominal aorta for fifty-one hours without apparent damage to the vessel. The case is unique in that it is probably the first instance wherein any such procedure has been attempted, and probably also in this case direct surgical attack was made on the abdominal aorta at a higher point in its course than has heretofore been made. That the artery was atheromatous is an additional point of interest, as my previous similar operations had been practiced on dogs with presumably healthy vessels.

I would much prefer to postpone this report until a more extensive personal experience had accrued, and my reason for not doing so at this time is that further opportunity for investigation along this particular line, as will be readily understood from the knowledge of the comparative infrequency of aneurismal disease in this locality, may be long deferred, and it seems to me that the results already attained and the lessons thus far taught are of sufficient importance to warrant their announcement.

My attention was first called to this question of gradual occlusion in 1898, in connection with the difficulties attending the necessity of formally resecting, in what seems to have been the first recorded instance, the superior longitudinal sinus. In a paper² containing a report of the above case I referred to the desirability, under certain conditions of closing the sinus by a gradual method in order to insure the establishment of the collateral circulation, and suggested the use of specially constructed clamps. In a subsequent communication³ I stated that the "method of gradual occlusion of a sinus suggested in the original paper, with a modified technic,

1 "The Gradual Surgical Occlusion of Large Arteries Its Relative Advantages Together with an Experimental Inquiry as to Its Feasibility." *Annals of Surgery*, August 1903.

2 "The Surgical Occlusion of the Cerebral Sinuses." *Annals of Surgery*, August 1898.

3 *Id.* January 1899.

has a probably wider range of application to the surgery of the blood vessels than was then intimated * * *

The importance of this in the surgical treatment of aneurisms of the large arteries, as well as in other conditions will be readily appreciated. In the fall of 1898 I had undertaken to test the practicability of gradual occlusion by the application of a clamp to the abdominal aorta of a dog, and in a paper¹ I described further experiments on dogs tending to strongly prove its feasibility.

That I am able at this time to present additional proof is due to the courtesy and professional enthusiasm of Dr T. A. Williams, who requested me to see the patient in this case and to follow my own judgment as to operative procedure. To him also I am indebted for the privilege of making the clinical report.

History—Male, aged 53, Greek, vegetable dealer. There is no history of syphilis nor of the excessive use of alcohol. He had scars resulting from glandular suppuration in both inguinal regions. Four years previously he had complained of distress in the epigastrium which developed gradually. In August, 1903, he underwent a laparotomy for abdominal aneurism at the French Hospital, San Francisco. What attempt at relief was made was not known to the patient. His greatest complaint later was of pain in the lower dorsal region and in the epigastrium. Four months before my visit he had become addicted to the use of opium, but subsequently was cured of this by Dr. Williams. The pain so increased, however, that the use of morphin was resumed and one grain a day had been administered hypodermically and gave considerable relief. His weight had decreased from 190 pounds, when his trouble began, to 147.

Physical Examination—I first saw the patient in March, 1905. His general condition was fairly good. Physical examination showed unmistakable evidence of the existence of an aneurism of the abdominal aorta of large size. The peripheral arteries were not appreciably atheromatous. The usual signs of expansile pulsation and bruit were present, and even the epigastrium was seen to pulsate forcibly. A consideration of the chart (Fig. 1), reproduced from a tracing of outlines marked on the patient's thorax and abdomen will reveal the position and relations of the aneurism and will explain some of the difficulties of the operation described. The dotted line shows the area of the epigastrium within which most superficial palpation detected the aneurismal pulsation, while the solid line represents the limits of aneurismal pulsation outlined by moderately deep palpation. It will thus be seen how close the aneurism approached to the ensiform cartilage. As nearly as could be estimated the distance was only 5 mm. The ensiform cartilage was 4 cm. wide at its base and 4.5 cm. long. The distance between the margins of the costal arch at the level of the tip of the ensiform cartilage was 10 cm., between the tips of the eleventh ribs it was 22 cm. The size of the aneurism as estimated by deep palpation was 9 cm. in both vertical and transverse diameters. The lower border was 3 cm. above the umbilicus. A cicatrix resulting from the former operation was noticeable and its character indicated healing accompanied by suppuration.

Operation—Operation was performed April 5, 1905, with the assistance of Drs. T. A. Williams, A. S. Kelly and J. M. Shannon. A median abdominal incision was made extending from the base of the ensiform cartilage well down over the aneurism. It was soon evident that conditions resulting from the first operation would complicate matters and make operation much more difficult than otherwise. The parietal peritoneum, liver, stomach and omentum were everywhere adherent to each other where normally in contact. The liver where visible in the wound was scarcely recognizable being of a peculiar yellowish brown hue. It was separated from the abdominal wall, partly by tearing away its capsule and leaving it adherent to the peritoneum and partly by incising adhesions and peritoneum. The entire ensiform cartilage was removed to gain space for necessary manipulations above the aneurism. In doing so the xiphoid artery was incised and ligated. The lower border of the left lobe of the liver was incised longitudinally for about 3

cm. between catgut sutures to gain space for the hand and instruments. After separating the lesser curvature of the stomach from the liver, to which it was closely attached, the lesser omentum was perforated with the index finger and the aorta sought beneath the posterior parietal peritoneum above the aneurism. The latter was pulsating forcibly from beneath the stomach and pancreas against the hand, against which it was firmly pressed because of the limited space between the aneurism and the liver and diaphragm. This constant impact made detection of the aorta extremely difficult. Pulsation in what seemed to be the abdominal aorta from its location could not be positively determined. What seemed to be the right border of the vessel was most distinctly felt and the peritoneum over it was torn through. This was accomplished with a long handled scarifier with which I had provided myself to be used in case the peritoneum resisted the finger nail. The index finger was then passed beneath the aorta. The peritoneum along the left margin of the vessel was torn through with the scarifier, and the finger was passed completely beneath the aorta, when it was positively recognized, not by forcible pulsation as I expected to find—in fact, the absence of this was especially noticeable, although its recognition was doubtless prevented by the constant rhythmic impact of the aneurismal sac against the examining finger—but by a peculiar whirring sensation or thrill imparted to the sense of touch by the blood current deflected from its direct course. The absence of pronounced expansile pulsation at the point of constriction is worthy of special notice as having a direct bearing on the question of the feasibility of prolonged instrumental pressure on the artery without damage to the arterial tunics, and no doubt accounts largely for the fact that appreciable injury was not wrought by this procedure. It may be accounted for by the firmness of the adventitia of the aorta.

Complete momentary stoppage of the flow of blood through the aorta caused entire cessation of pulsation in the aneurism. Considerable venous hemorrhage attended the separation of the adherent organs and the dissection of the aorta, and on this account and because of the depth of the vessel and the fact that the possibility of retraction of the superficial structures was very limited because of the rigidity resulting from the preceding inflammatory process, most of the steps of the procedure had to be carried on by the sense of touch alone. The part of the aorta reached by the finger, so far as could be determined, seemed pliable and healthy, although situated close to the aneurism. At this stage, 11 20 A. M., a cotton tape, 12 mm. wide, reinforced longitudinally along its central line by a tape 4 mm. wide and the whole impregnated with paraffin⁴ and attached at one end to the arterial constrictor⁵ (Figs. 2 and 3) was passed from left to right beneath the aorta on the point of a hook-shaped instrument which was guided by the index finger beneath the vessel. This proved to be the most difficult part of the operation. The free end of the tape was then attached to the constrictor, which was tightened so as to make apparently a very slight impression on the aneurismal throbbing. More was not attempted for the reason that the general condition of the patient at this time was not encouraging, and it was thought best to avoid doing anything that might still further depress him. Gauze packing loosely applied was arranged spirally around the constrictor and extended from the aorta out through the skin opening to prevent contact of the metallic parts of the instrument with the viscera which would have caused local necrosis to control venous hemorrhage and to cause adhesions to be formed around the constrictor thus to shut off the general peritoneal cavity from the site of operation in case, notwithstanding our efforts at its prevention sepsis should occur. The constrictor thus ap

4 This arrangement of the tape was made as tending to cause the borders of the wider tape to flare outward thus reducing to a minimum the amount of traumatism due to the impact of the pulsating arterial wall against the tape margin. The instrument also was designed to effect the same end. Paraffin was used to prevent adherence of the tape to the vessel. The portion of the tape only which is to lie in contact with the artery—the whole being sterile and dry—should be merely dipped in boiling paraffin and the excess thoroughly removed from the tape.

5 For several valuable suggestions in regard to the constrictor I am indebted to Mr. Ole Olson, surgical instrument manufacturer of Oakland, Cal.

pled rose and fell with each aortic pulsation. The abdominal incision was closed around the gauze and instrument. The latter was covered with loosely fluffed gauze and cotton and the dressings so arranged that no pressure would fall on the constrictor. The patient stood the operation comparatively well. He was soon conscious after its close. He vomited slightly at this time.

Postoperative History—April 5, 4 20 p. m. The patient was in good condition, pulse, 81. There was considerable seepage of blood, and the wound was redressed. The constrictor was tightened until a decided impression was made on the aneurismal pulsation and on the femoral pulse. After this the pulse was 80. The patient was not distressed by this procedure. At 10 p. m. he was in good condition, pulse was 81,

lately on account of the motion transmitted to the neighboring parts by the constrictor and the aortic pulsation. The patient said that he did not feel different than before this last increase in the degree of constriction. After this the pulse was 84 and the man rested quietly. At 5 p. m. he was in good condition. He vomited twice without much retching. The pulsation in the femoral artery was more pronounced, but still very feeble. Deep palpation over the aneurism revealed a feeble thrill. The tapes were tightened until the thrill disappeared, this very slightly reduced the force of the femoral pulse. The patient did not complain much of pain. There was some slight hic cough. After tightening the tape the pulse remained at 84. The extremities were warm, there was no paralysis of motion or of sensation in the lower limbs.

April 7, 8 a. m. The general condition was excellent, the patient passed a good night. The femoral pulse was larger, and pulsation over the site of the aneurism was noticeable, but a thrill was not discernible. Inasmuch as I was of the opinion that the constrictor was applied below the celiac axis, and being emboldened by Keen's report of a case wherein he applied a ligature to the abdominal aorta, "whether above or below the celiac axis was not quite certain, but it was surely applied above the renal and mesenteric arteries," without prolonged circulatory disturbance, the constrictor was further advanced and the femoral pulse abolished. Pulsation over the site of the aneurism was less pronounced, but still discernible. It was not expansile, however, nor was a thrill discoverable. After constriction was complete the patient became restless and complained of pain in his back and tingling in his lower extremities. The pulse before final constriction was 70, a few minutes later it was 78.

Unfortunately the patient's condition grew rapidly worse following this treatment, and I was summoned to the hospital at 2 15 p. m., when he was moribund. His pulse was rapid and feeble and just perceptible at the wrist, his countenance was pale and respirations shallow. The tape and constrictor were immediately removed, no hemorrhage resulting, the gauze pack was left *in situ*. This, together with active stimulation, failed to give relief, however, and the patient died at 3 p. m., less than an hour later.

Remarks—Inquiry elicited the fact that, shortly after the closing of the constrictor, the patient became very restless and complained of pain in the lower limbs, and that after only ten minutes had elapsed there was present motor and sensory paralysis in the same

parts. The knees, legs and feet became cold, but the thighs retained considerable heat.

After the operation the patient passed urine four times. April 6, 1 a. m., 12 oz., 2 p. m., 12 oz., 5 50 p. m., 15 oz., April 7, 8 50 a. m., 14 oz. A sample of urine, a mixture of the second and fourth urinations, gave the following result on examination. Sp. gr. 1020, strongly acid, no albumin or sugar, heavy sediment of urates, urea, 15. Microscopic examination showed urates, no pus, blood or casts. Pain and restlessness were controlled by hypodermics of morphin sulphate, gr. $\frac{1}{2}$, and atropin sulphate, gr. $\frac{1}{75}$, to which dose the man was accustomed. One of these hypodermics were given on April 5, three on the sixth and one on the seventh, besides another of $\frac{1}{4}$ gr. morphin sulphate on the seventh. This quantity of the

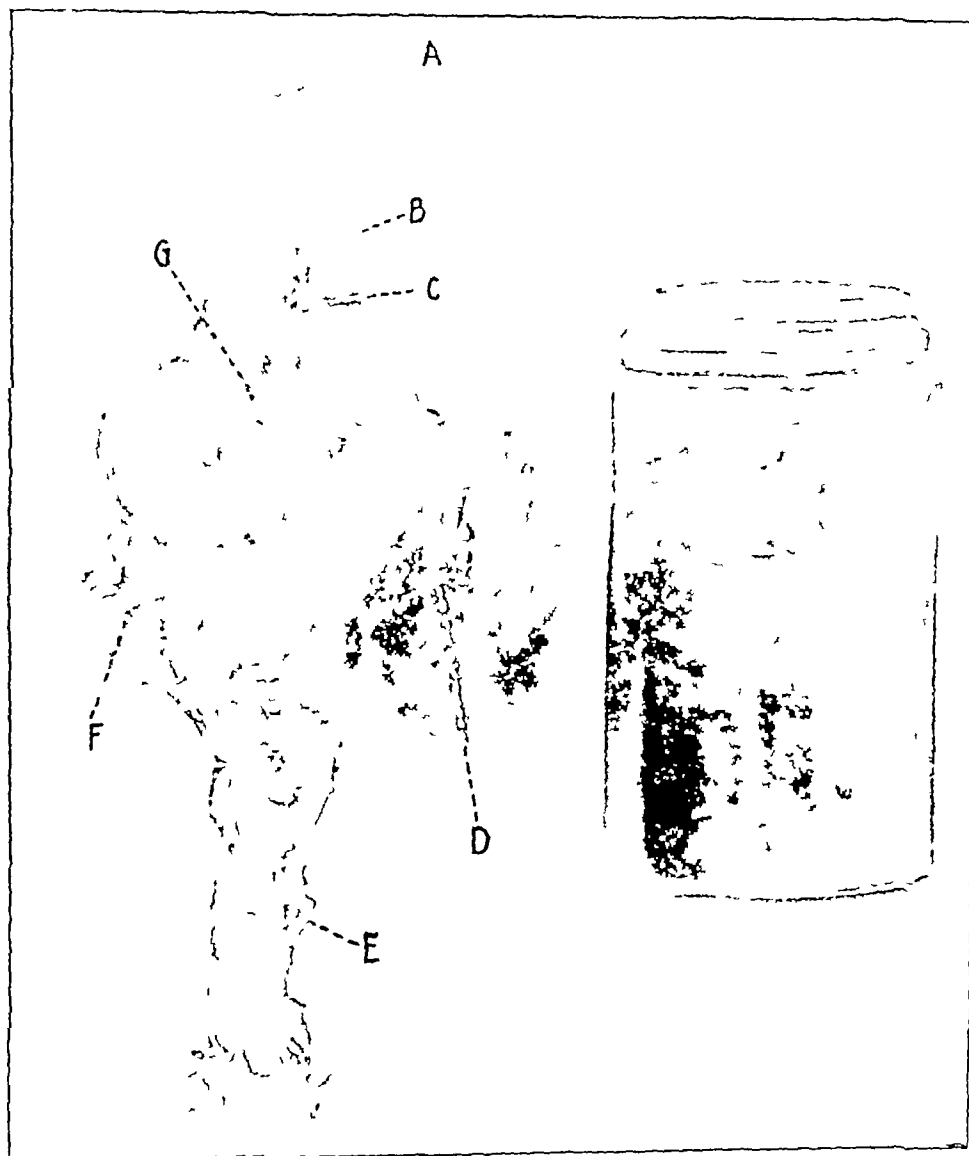


Fig. 4—Aneurism and conglua removed from sac. One-fourth actual size. A Phrenic artery. B Site of application of constrictor. C Celiac artery. D Left renal artery. E Inferior mesenteric artery. F Right renal artery. G Superior mesenteric artery.

full. Pulsation in the aneurism was about as forcible as before the afternoon treatment. The windlass was tightened until there was a decided lessening of force of the femoral pulse and pulsations in the aneurism were just appreciable. The constrictor had a strong tendency to bend downward and to twist from left to right.

April 6, 10 p. m. The patient had a comfortable night, sleeping well. Temperature was normal, pulse, 84. He had no desire for food or drink. There was no paralysis, pulsation in the femoral artery was more pronounced than immediately following last constriction, but not so marked as after the previous treatment. The radial pulse was full. Constriction of the aorta was advanced so as to leave a just perceptible femoral pulse. This caused the aneurismal pulsation apparently to disappear, but it was difficult to determine this abso-

anodyne averaged, however, only about what he was receiving prior to the operation. The maximum temperature on April 5 was 99.3 F (by mouth), on April 6, 100.4, on April 7, at 5.20 a m, 98.9, at 11 a m, 99.2, at 1 p m, 102.2. This last temperature was evidently due to immediate antemortem influences.

Autopsy—Examination of the abdomen only was permitted. The operative incision was found to be approximately 12 cm. This incision and the entire operative wound and parts adjacent thereto had apparently remained uninfected. There was no hemorrhage, nor was any necrosis of viscera discovered. The intestines and peritoneum were not injected. The kidneys were congested and had the gross appearance of incipient interstitial nephritis. The spleen was congested, the gross appearance of the liver was normal. The aneurism (Fig 4) extended from just above the celiac axis to 6 cm above the bifurcation of the abdominal aorta. Its total length was 12 cm, its width, 12 cm, (these measurements were taken after the sac was removed from the body and artificially distended). It was divided into three compartments, one in the median line extending forward 8 cm from the spine, one compartment on each side of the spine lay alongside of the vertebral bodies. The one on the left extended vertically 7 cm and that on the right 8 cm, each being about 4 cm wide. The bodies of the twelfth dorsal and first lumbar vertebrae were eroded, the latter being destroyed to a depth of about 2 cm and the former some what less. The aneurismal sac was attached to the spinal column. The celiac axis, superior mesenteric and right and left renal arteries around these eroded areas arose from the sac. The entire abdominal aorta with aneurism was removed.

A close examination of both internal and external surfaces of the aorta failed to reveal the site of the application of the constrictor. In my dog experiments a zone of ecchymosis discovered externally in the adventitia and minor areas of erosion of the intima internally plainly marked the site of the tape and constrictor. No such evidence of violence existed in this case. Only after the specimen had been immersed some time in a weak formalin solution did a relatively pale transverse zone, discernible on the external surface only and approximately the width of the tape mark the place where it had surrounded the artery. It was thus seen that the constrictor had been placed about 15 mm above the upper margin of the aneurism and 25 mm above the celiac axis. The only evidence of traumatism discernible in the neighborhood was such as was presumably due to the removal of the specimen postmortem. A number of small superficial atheromatous areas were discernible in this part of the aorta. Several very small ones were beneath the site of the constrictor.

The aneurismal sac was moderately well filled with large masses of laminated coagula aggregating 350 c.c.m in volume. They were all of recent origin and of different consistency, being most firm where lying in the more direct line of the blood current. Besides these masses there was a small amount of fluid blood and a trifling amount—not more than 1 c.c.—of passive clot.

Pathologic Report—To Dr Pauline S Nusbaumer I am indebted for the following report on the pathologic specimens, which were submitted to her for critical examination.

In the specimen of aneurism of the abdominal aorta I find no evidence of traumatism, neither macroscopically nor microscopically at or immediately adjacent to the point of compression of the artery other than that produced by manipulation during and subsequent to autopsy, and that consists of slight lacerations only. The sclerotic condition of the artery at the site of the application of the constrictor is readily detected by the naked eye, and on sectioning there is seen the thickened intima with the deeply stained elongated cells of the atheromatous plates but no round cell infiltration as one would

expect to find in inflammation following injury, nor any necrotic areas such as would be produced by pressure. Eight sections of the aorta in all were made, as nearly as could be ascertained from different areas directly under the tape and constrictor, five from beneath the former and three from beneath the latter.

The clot, of which two different areas were sectioned, is decidedly stratified and is not of the passive variety. It must be borne in mind that the time was short for many cellular changes to take place in either the vessel walls or the coagulum.

The cause of death, from a consideration of both the case history and autopsy findings, may be reasonably attributed to the inhibition of the functions of the abdominal viscera from the withdrawal of their blood supply.

Notwithstanding the fact that this patient died, the case as a whole warrants a degree of enthusiasm as to the outlook for the procedure. The relatively small amount of distress caused the patient by the presence of the constrictor and its subsequent manipulations, the apparent avoidance of infection, the safe removal of the instrument, the formation of a large mass of laminated coagulum, the apparent maintenance until entire closure of the vessel, of the lumen of the arterial branches arising within the sac distributed to vital organs and without a dependable collateral circulation, but above all the freedom of the aorta itself at the site of closure of perceptible evidence of traumatism, inflammation or necrosis due to prolonged pressure on the vessel—all these facts, I believe, form the basis of a strong hope that a larger percentage than heretofore of patients with aneurismal disease may be brought within the range of relief. If future experience shall fulfill that hope, the method will undoubtedly find its largest scope of usefulness in the treatment of aneurisms of the abdominal aorta wherein ligation is almost necessarily fatal, and other methods are either impracticable or have proved themselves inefficient or fraught with grave dangers.

Certain additional lessons are taught by this experience. The constrictor, under ordinary conditions and with a healthy or but slightly diseased aorta, can be left in place much longer than in this instance. I would not now under such circumstances hesitate to apply it for four days. This will permit the very gradual closure of the artery with the formation of a more firm coagulum. This is of special importance in relation to the treatment of aneurisms which arise high up in this vessel and from which arterial branches arise from the sac to be distributed to the abdominal viscera. It will more perfectly assure maintenance of their lumen. It will also safeguard against failure from the breaking down of the clot and against embolism when the full blood stream is again allowed to flow through the artery, the gradual relaxation of the constrictor after its work has been performed will be an additional preventive of this and will be permissible in view of the proven tolerance of the vessel to a more prolonged contact with the instrument. In the case of its application to the carotid artery, where such an accident would be disastrous, the procedure, in order to avoid this presumptive risk, may best be used as a prelude to ligation after expansile pulsation in the sac has ceased and the cerebral functions indicate the formation of a competent collateral circulation. When we consider that over twenty-five per cent of cases wherein a single common carotid artery is ligated develop cerebral disturbance and that above one-half of those patients die (Erichsen), and that this result is probably due to failure of the prompt establishment of the anastomotic circulation this risk does not seem so formidable. The evidence that this necropsy

7. If by any possibility a small transverse laceration internally found to be located at or just below the site of the lower border of the tape occurred other than during postmortem manipulation it could only have been due to a defect in the instrument which was easily corrected and it need not therefore be taken seriously. A lack of sufficient space beneath the cross-bars in the presence of an excess of paraffin on the tape caused a binding of the latter beneath the bars and an unnecessary amount of pressure on the artery during the removal of the tape.

many operations of a major kind are not followed by insanity at all. The fact that many women go through the menopause without mental symptoms can not be urged as an argument either way, because, though the ovaries cease to ovulate after the menopause, they might still secrete some substance beneficial to the nervous system. Insanity may follow any operation.

Picqué and Briand state that all the surgeons taking part in the discussion of the Société de Chirurgie in 1898 were unanimous in the conclusion that operations on the female genital organs did not predispose to psychoses any more than other operations did. Previous to this in 1891 the surgeons who took part in the discussion of the Congrès de Chirurgie reached the same conclusion. In this Picqué and Briand agree. I am not prepared to accept this view of the subject. I believe that insanity does follow more frequently from operations on the pelvic organs than from any other operation. There are reasons for this to which I will refer later.

The forms of insanity which follow operations on the pelvic organs are, first the toxic insanities. These psychoses have no place in this article because they are caused by toxæmia and, therefore, have no direct relationship to the removal of the pelvic organs.

The organic insanities are paranoïa, melancholia, presenile delusional insanity, periodic erotic mania and paresis. Paranoïa of course is not caused by any operation. The individual is born a paranoïc, the operation simply hastening the development of a disease ready to exhibit itself under suitable conditions. Nor can paresis be regarded properly as a postoperative psychosis. The syphilitic basis must be present in this disease. The operation with its exhaustive consequences simply develops a disease already present.

The causes for insanity, following operations on the pelvic organs, are first of all, heredity and congenitally defective brains. I do not believe it is possible for any psychosis to develop after any operation on the pelvic organs in a healthy brain.

The psychologic causes are not by any means unimportant—the fear of death from the operation, disappointment at not being able to bear children, and the consequent curbing of the maternal instinct, the fear of the loss of the husband's love, the fear of becoming cold and indifferent to the husband, and the fear of required masculinity—all exert a powerfully depressing effect on the mind, and contribute, in a brain predisposed to insanity, a great influence in developing psychoses.

Such physical causes as anemia, neurasthenia and the breaking down of the general health from long-continued disease, also influence a tendency to the development of a psychosis. In almost all cases the patient has suffered for months and even for years from an exhaustive disease before operative procedures are advised, and this exhaustion and malnutrition is certainly influential as a causative factor in insanity. Surgical shock is by no means an unimportant cause.

My position on this subject is that the ovaries and uterus have nothing to do with the preservation of the integrity of the brain, and that their removal alone never causes insanity, that the insanities which follow operations on these organs depend on a hereditary tendency to insanity, the psychologic causes and the physical causes, and the surgical shock already referred to, but that the principal cause of all is the congenitally defective brain.

THE NAUHEIM BATHS AND TREATMENT OF HEART DISEASES

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During my stay in the United States an article by Dr J M Anders¹ of Philadelphia on the action of the Nauheim cure attracted my attention. I deem it my duty to say a few words in reply to his statements, both in the interest of Nauheim and of Americans suffering from heart diseases who are unable to visit Nauheim for relief.

Those not acquainted with Nauheim and the prevailing conditions who read these statements must be led to the conclusion that it is a generally accepted practice at the place to treat heart disease with gymnastic exercises. This is by no means the case. The fact is that out of fifty physicians practicing in Nauheim the Schott treatment is solely applied by Professor Schott. A number of the Nauheim colleagues still occasionally permit the patients to exercise with the Zanders apparatus, but not until the muscles of the heart have been sufficiently strengthened by the bath treatment, which means near the termination of the cure. Then they apply preferably apparatus which produce passive movements, and particularly movements which tend to induce deep breathing without the least active exertion on the part of the patient thereby not causing overworking of the heart. The number of physicians who reject even these apparatus is considerable. They rely mainly on the baths, prescribe all the rest possible and try with the aid of additional means, such as massage, diet, etc., to unburden the heart. During the last season over 26 000 people came to Nauheim to take the bath treatment. Of this number certainly by far the majority were not treated by the Schott method. In spite of the absence of this treatment, the results have been, to say the least, equally as good. Therefore I am fully justified in the assertion that Dr Anders has given the gymnastic treatment an importance to which it has absolutely no claim. To attribute recovery from diseases of the heart in Nauheim to the exercises is absurd, it is the Nauheim baths, plain and simple, which constitute the essential curative factor. Before entering more specifically on the bath treatment I wish to explain why I could not—without harm to the interest of patients not able to visit Nauheim—allow the misleading statements of Dr Anders to remain unchallenged.

Frequently during my stay in the United States I have had the opportunity to discuss with my American colleagues the treatment of heart diseases in general. Invariably I have been informed that heart patients were subjected to gymnastic exercises, and in many instances I was referred to articles on this subject published by Schott, Thorne and other authors, and more than once my attention was drawn to Dr Anders' paper. I was repeatedly assured that following gymnastics the area of dullness was diminished and the pulse rate reduced. But does that actually prove anything for the efficiency of gymnastics? I hardly think it does. On the contrary, I consider gymnastic exercises in most cases of heart diseases, especially myocarditis, under all circumstances very dangerous. Gymnastics are not without danger in any case, because in all cases of heart diseases the myocarditis is more or less affected, too. It is the more dangerous where the neutralizing

² Picqué and Briand "Études de psychoses postopératoires" Arch de Neurol, Second Series, No 15, 1903

¹ THE JOURNAL A M A, Jan 14, 1905 p 110

agent of the Nauheim baths can not be given at the same time to counteract the damaging effect of the exercises. In other words, I consider the treatment of heart disease with exercises, especially in those cases where the Nauheim baths are not available, extremely dangerous. Where a diminution of the area of dullness has been found, following gymnastic exercises, there is by no means a certainty that the actual size of the heart has decreased. At best the percussion of the heart is of a conditional value. To be of value it is necessary that the consecutive examinations by percussion are to be made under exactly the same conditions. The position of the heart is changed with the variations of the amount of the stomach's contents, and in like manner an expanded lung replete with air changes the boundaries of the area of dullness. In support of the latter contention in particular I refer to the work of my Nauheim colleagues, Grote and Reissner.² Both colleagues have by an extensive series of very carefully conducted investigations determined that the bath produces an increased depth of the respiration, and the consequent expansion of the lungs causes the deceptive appearance of the reduction of the size of the heart. The same increased expansion of the lungs, which also follows the deep respiration which Schott advises during the exercises, must be held responsible for the reduced pulse rate—not the gymnastic exercises.

Schott contends that by gymnastic exercises, by vigorous stimulation of the heart's action, in one of his first publications on this subject—if I am not mistaken—he uses the term *Herz-Turnen*—the muscles of the heart are strengthened. He assumes in this connection that the same conditions prevail with the diseased muscles of the heart as with weak and poorly developed external muscles of the body under voluntary control. There can be no doubt that muscles, otherwise healthy, that are below the average in their development may through systematic exercises be brought up to the normal, and more emphatically I contend that this capacity can be increased above the standard. I need only refer to the excellent results of physical culture and scientific training under the direction of competent men practiced at your American colleges and universities. With patients visiting Nauheim we do not deal, except in the rarest instances, with healthy or merely poorly developed heart muscles, but with pathologic changes, and often with degenerative processes, sometimes of the gravest nature. Weak and diseased muscles of the heart can never be strengthened by increasing their burden, but by lightening it, which means rest. It has been my experience that absolute rest of the heart, through diet, massage, sun baths, etc., are followed by the more certain results. I trust the reliability of my observations will not be questioned, as the greater part of my patients are constantly under my supervision, i. e., those who stay at my sanatorium.

Now, in regard to the influence of the Nauheim baths, I can readily understand that anyone who lacks the opportunity of observing a greater number of heart cases in the place itself will consider the matter somewhat skeptically. It appears at first thought incredible that twenty or thirty baths, or even a few more, should bring about such potent influence on a diseased organ, and yet this is actually the case. The fact that the number of patients afflicted with heart troubles in the last decades has annually increased considerably in Nauheim tends to show that more and more physicians and patients

alike are becoming convinced of the efficiency of the Nauheim baths.

What produces the effect of the bath? In my opinion, we need not look for a difficult explanation. In all chronic diseases we find metabolic disturbances. We all know that the lymphatic circulation bears a very important relation to metabolism. Now, the plain water baths bring about a stimulating influence in moving the body fluids, and in a more marked degree this action is found where the baths contain an increased amount of salts. Add to this the proper conditions of temperature, the presence of carbonic acid gas, as in the Nauheim waters, and other agents of physico-chemical nature, which have not yet been definitely determined, and the action of baths is increased to a vigorous stimulation of the lymphatic circulation. In addition, Nauheim enjoys the exceptional advantage of a great variety of bathing forms, which enables us to grade the baths to suit the indications of the weakest as well as the more resistant patient. It naturally follows that a thorough treatment at Nauheim is to be preferred to one at home. But not all patients suffering from heart troubles can visit Nauheim, and for various reasons a great number must be content with home treatment. If at Nauheim it is proper to aid the baths by dietetic treatment and measures directed toward unburdening the heart—these include the Abée heart-support—certainly all these must apply in a larger scale to a treatment at home where the artificial substitute must naturally fall behind the efficiency of the original Nauheim baths. At any rate, over-exertion of the diseased heart, gymnastic exercises in whatever form, can not be too strongly condemned.

THE MEDICAL PROFESSION AND THE MEDICAL JOURNALS IN RELATION TO NOSTRUMS *

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Primarily, the medical profession is to blame for the present extensive use of proprietary medicines, of which the majority are nostrums.

The law of demand and supply applies here, if we did not prescribe them, they would not be manufactured. "There's millions in it." The medical profession is blind, we do not see that we are the dupes of men as fertile as Colonel Sellers in schemes and far more practical than he, in that they put their plans through to a finish.

Commercial cupidity exists in all the walks of life. It is small cause for wonder that shrewd men should take advantage of an opportunity that is lucrative and at the same time so easily exploited.

As it seems to me, the chief causes are evident. A large number of the medical profession do not practice medicine rationally. They have no clear conception of disease processes. They do not study and examine their patients. No diagnosis is made at all, or only from subjective conditions. Symptoms are treated. Headache, backache, indigestion, albuminuria, cough, constipation, dysmenorrhea, insomnia, nausea, dyspnea, etc., call for drugs, with usually no attempt to get at the underlying cause. I regret to say it, but I believe that many, many

² A report appearing in the *Münchener med. Wochsft.*, October, 1903.

* Read at the meeting of the Suffolk County District Society of the Massachusetts Medical Society Jan 3, 1906. A report of this meeting with the discussion appeared in *THE JOURNAL* Jan 20 1906 p 220.

physicians practice medicine on that basis. Think, for a moment, of the vast number of proprietary mixtures usually nostrums, advertised and distributed in samples to physicians as symptomatic cures.

This sort of practice requires a vast number of these nostrums. He who treats symptoms must necessarily change the medicine from time to time to satisfy and to hold his patients. He relies on ready-made, symptom-indicated, dose-directed, usually palatable medicine. He believes what he reads in the "literature" of nostrums sent to him or as it appears in the advertisement found in his medical journal. He forgets that this testimony is inserted for pay. He sees testimonials from professors and practitioners praising the remedy and he believes.

But he is fickle and drops his last specific cure-all for a new one, which comes to him in sample, by mail, or is presented to him by the traveling agent in a confidential and instructive (?) way, and again he believes. He forgets that this agent is either a doctor, who has failed as a practitioner, or an ex-drug clerk whose full worth is commanded by ten or fifteen dollars a week. Usually the physician is told that the preparation is ethical and that its formula is published (usually, however, without indicating the amount of the constituents of the mixture contained in a dose). The process of manufacture is dwelt on—"after painstaking research" the mixture is so put up that new and heretofore unheard of potency is developed in it.

It is a common experience of druggists to have a rush of prescriptions for a nostrum which has just been sampled to the physicians in the neighborhood.

For ways that are dark the exploiters of copyright preparations are sufficient and proficient. The nomenclature of these compounds is a wonder. No especial system is followed. A catchy name appears to be the main thing. The name may consist of a euphonious combination of the alleged ingredients, of a morbid symptom or process combined with a drug, of a name indicating the alleged number of ingredients in the mixture, or of any coined word that is striking in print or sound. So we have Sanmetto, Ferroleum, Salochinin, Peptomangan, Uric-Antagon, Antiphlogistine, Zymotocine, Gonosan, Anasarcin and Antikamnia, Duotonol, Quartonol and Sextonol, and Utrolone, Chionia, Cystogen, etc., as examples. Apetzo is a breakfast food, and the name makes one hungry. It is said to be an iron food. Apetol is a medicine, a strengthener which strengthens, composed of a dozen or more drugs. Rheumagon suggests a possibility that the "rheum" had "gone," but it is said to contain sodium iodid and sodium phosphate, and to cure rheumatism and all conditions resulting from uric acid in excess and disturbed metabolism. This is not the only uric acid annihilator, for they are numberless. The average proprietor of a trademark preparation looks on uric acid as one, if not the worst, enemy of mankind. He offers us uric-acid solvents in the form of natural mineral waters (recently these are radioactive as well), artificial waters, salines, plain and effervescent—all things to "touch the liver," and so every one concerned is happy, except a majority of the patients.

Often a chemical or drug is used by different proprietary firms in a mixture of other and often indifferent substances and presented in powders, tablets, etc., under different copyright names. For instance, Hexymethylene-tetramine, which is recognized as an excellent antiseptic in diseases of the urinary apparatus, is ex-

ploited in mixture in a dozen or more trade names by as many firms. Cystogen, uriform and aminiform are examples. Acetanilid is exhibited in mixture as bromoseltzer, antikamnia, orangeine, phenalgin, ammonol, megrimin, etc., by different proprietary houses. Some of these mixtures have even been presented as synthetic chemicals. Well-informed physicians believed this until the Council on Pharmacy and Chemistry of the American Medical Association made known the formulæ after analyses of the mixtures.

It may be well to say, in passing, that mixtures which contain poisons, like opium and its derivatives, chloral, cocain, strychnin, arsenic, acetanilid, should be properly labeled, with the amount of the drug contained in the mixture. It is a common occurrence in Chicago to find patients suffering from chronic acetanilid poisoning due to the continued use of the mixtures which contain acetanilid, but which do not indicate the presence of the drug in the preparation. They are advertised as cures for fevers, colds, cough, as tonics, as "bracers," etc.

I am very sorry that acetanilid was made official in the last Pharmacopœia as *Pulvis Acetanilidi Compositus*. I think it too dangerous a drug to be used as a medicine, and especially when there are so many harmless substitutes.

But to return to the nomenclature. It is contrary to all scientific standing and progress. It is meaningless. Without a scientific terminology, pharmaceutical preparations can not be studied or learned. The deception practiced by the nomenclature of the nostrums is detrimental to all scientific progress and to the morals of the profession and is harmful to humanity. But the nomenclature is linked with a most astounding statement of physiologic action and therapeutic indication in the "literature" of these preparations and in the advertisements in medical journals. Let me quote a few of these statements.

"Hexamine" "It is invaluable in cystitis of all kinds, albuminuria, gout, gravel, incontinence of urine, pyelitis, pyelo-nephritis, renal and vesical calculus, phosphaturia, rheumatism and irritable bladder from any cause. In typhoid fever it prevents the spread of the infection and destroys the colon bacillus."

Who could ask for anything more definite and universally applicable?

"Sanmetto is not an excitant or stimulant. Its purpose is soothing, healing, restoring. It soothes the irritation, heals the diseased mucous membrane and restores tone to the enfeebled parts. By its use the genitourinary organs are builded up to a state normal with the age of the patient, and thus at the same time any pathological conditions that may be present as a result of their impairment are relieved or cured."

This negative and positive statement of a tonic which soothes and heals and does not excite or stimulate but cures is better than the fabled fountain of youth.

"Antiphlogistine" "It depletes the visceral blood vessels by flushing the superficial capillaries—bleeds but saves the blood."

I wonder if any sensible-thinking doctor believes this. If he does, I'd like to know why.

"Cascara-Aletris" "A laxative utero ovarian tonic, alterative and sedative." "It contains the purely active matter from aletris, cramp bark, wild yam, squaw vine, black haw, blue cohosh, golden seal and cascara sagrada, the inert and objectionable elements being eliminated. Free from alcohol and sugar. Very palatable. A decided advance in modern therapeutics."

Could you ask for any better example of a "shotgun" dose, and that, too, a laxative, a tonic, a sedative and alterative!

"Tongaline" "Antirheumatic, antineuralgic. Cures rheumatism, sciatica, lumbago, grippe, neuralgia, malaria, headache, gout, because Tongaline contains standard remedial agents of absolute purity, combined with salicylic acid made from the natural oil of wintergreen. Tongaline acts upon the poisonous products of retained excretion or perverted secretion and eliminates them promptly and thoroughly, thus insuring in every instance certain results from certain doses in certain time."

Verily, this is too much! At this rate there will be no reason to die. The practice of medicine with tongaline is too easy.

"Pill Orientalis (Thompson)" "The therapeutic value of ambrosia orientalis (imported solely for ourselves) as a powerful nerve and brain tonic and powerful stimulant of the reproductive organs in both sexes can not be overestimated. It is not an irritant to the organ of generation, but a recuperator and supporter."

This ought to answer, once for all time, the statement of certain quack advertisers of "Lost manhood, how restored!"

"Sulpho-Lythin" "Is a true hepatic stimulant, intestinal, antiseptic, antizymotic and toxine eliminator."

This is almost as good as the statement of the old woman of Irish extraction who praised the effect on the bowels of sulphur and molasses. "Sure, the molasses moves 'em and the sulphur moves 'em."

"Anascarcin" "Absolute cure of dropsy caused from heart, liver or kidney troubles."

These are strong words, but they are justifiable. From every quarter come enthusiastic reports of clinical results accomplished by prescribing anascarcin, not only in dropsies, but in exophthalmic goiter. All those natural speculations in the doctor's mind as to the usefulness of this remedy should be immediately dismissed.

The statement of an absolute cure for dropsy, of any cause, is enough to condemn a preparation.

"Glycozone is daily making converts among physicians for its wonderful work in inflammatory and contagious diseases of the alimentary canal. It is the rational treatment in gastric and intestinal disorders, such as dyspepsia, gastritis, gastric ulcer and all contagious and inflammatory diseases of the stomach and intestines."

Such converts as this stuff makes among physicians are not worth saving.

Physicians everywhere prescribe Triacol (Alpers) with unequalled success and perfect satisfaction in bronchitis, coughs, pharyngitis, laryngitis, phthisis tuberculosis. They prescribe it because it cures."

It is prescribed because it cures tuberculosis, bronchitis, laryngitis, etc. The physician who would prescribe it on the basis of the statement made should have his license taken from him.

"Metris Cordial Rio is indicated as a prophylactic remedy against postpartum hemorrhage, uterine weakness, great development of the fetus and of the adnexa, and in those cases where there is a disposition to hemorrhage."

A prophylactic against uterine weakness (what is it?) great development of the fetus! Good Lord! What next?

These are some of the statements made in the advertisements of a few of the many proprietary medicines. The majority of the quotations are from medical journals. One is not surprised to receive the scarlet literature of the nostrums through the mail. Nor is one especially shocked to find reports of impossible cures and astounding statements in the medical trade journals for such journals are published wholly in the interest of proprietary houses. But one is disturbed to find that the regular and otherwise respectable medical journals pub-

lish such rubbish as I have quoted. Such advertisements will be found in the *Medical Record*, *New York Medical Journal*, *the Medical News*, *The Boston Medical and Surgical Journal*, *American Medicine*, *British Medical Journal* and *London Lancet*. Recently the pages of THE JOURNAL of the American Medical Association have been purged of some of the objectionable advertisements, but still advertise some medicines with very objectionable statements as to the therapeutic effect.

Now I, and I think most people, believe that the advertising pages of a medical journal are a legitimate part of the publication. Editorial responsibility should extend to every part of it. There can be no question of the harmful effects on the profession of the flood of nostrums. It is injurious, therefore, to promote in any way the use of them. The editor of a medical journal can not escape the responsibility of the character of the reading matter, and the influence it may have, which appears in his journal.

The term "ethical" appears in many of the statements of the proprietors of nostrums. The word covers a multitude of sins. The Standard Dictionary defines ethics as "the science of human duty, the science of right character and conduct." The alleged curative properties of preparations quoted above and of many others advertised in medical journals and in the other "literature" circulated in various ways do not conform in any way with the definition of the word.

Indeed, the method of advertising these "ethical" preparations in the medical press would, with very little alteration, fit any "patent" medicine advertised in the lay press.

To illustrate I quote from the lay press.

"What is Castoria? Castoria is a harmless substitute for castor oil, paregoric and soothing syrup. It is pleasant. It contains neither opium, morphin nor other narcotic substance. Its age is its guarantee. It destroys worms and allays feverishness. It cures diarrhea and wind colic. It relieves teething troubles, cures constipation and flatulency. It assimilates the food, regulates the stomach and bowels, gives healthy and natural sleep. The children's panacea—the mother's friend."

This is, like the "ethical" advertisement in positiveness of statement, both affirmative and negative.

"Tonsiline is the greatest throat remedy on earth. Tonsiline cures sore throat of all kinds very quickly and is a positive, never failing and speedy cure for sore mouth, hoarseness and quinsy."

As this appears in a newspaper, the profession will say it is a quackish statement made to fool the laity. But as bad and worse statements concerning nostrums appear in medical journals.

"Ask your own doctor, if he tells you to take Ayer's Cherry Pectoral, for your severe cough or bronchial trouble, then take it. If he has anything better, then take that, only get well as soon as possible, that's the object. Doctors have prescribed this medicine for sixty years. We have no secrets. We publish the formulas of all of our medicines."

Now, can you see any great difference in the alleged curative powers and the therapeutic indications of the preparations quoted from the lay journals and the medical press? In fact, there is none. The language used in the advertisements placed in the medical journal is a little more technical and, for that reason, is often not so rational as the statements made in the lay press.

The medical press is an educator. Through it, more than by any other means, medical knowledge is widely disseminated. It is a power which, when properly directed, yields untold riches for the benefit of the medical profession. But it has an equal power for evil. If

it, as an educator, contains material which is false and misleading, even though this is confined to its advertising pages, it does an infinite harm to the profession and to mankind

I have not met an editor who defends the practice of advertising nostrums. Confessedly it is done for money, not for the editor, but for the publisher. The excuse offered is that the editor is engaged to edit the medical articles, the publishers print the journal and supervise the advertising department, but this is not explained to the reader. To the average man all printed statement is fact. He believes the printed word when he would doubt the oral statement. This is the result of our methods of education of children. They are taught to believe all they read. Many persons never discover the fact that, as Burns says

Some books are lies fra end to end,
And some great lies were never pern'd,
In a ministers, they hae been kenn'd,
In holy rapture,
A rousing whud, at times to vend,
And naillt wi' Scripture

The proprietary medicine evil is due chiefly to the credulity of the medical profession. The cupidity of the proprietors and promoters is the second cause, and, unfortunately, the medical journal lends itself to the exploitation of the nostrum.

Few of us probably realize the extent to which the use of proprietary medicine has grown in a short period of time. To judge by the prescriptions filled in drug stores of large cities at least 50 per cent of the members of the profession use proprietary medicines.

The statement is made¹ that in New York City about 70 per cent of the prescriptions filled in large drug stores call for proprietary preparations. This statement is a general one and probably not definite.

In Chicago I have secured data from two drug stores. In one large downtown drug store 42 per cent of the prescriptions contained proprietary medicines. This pharmacy fills the prescriptions of physicians who in many instances occupy high places in the profession.

The second drug store is in a residence neighborhood where chiefly the prescriptions of the family physicians are filled. This showed about 50 per cent of prescriptions calling for out-and-out proprietary mixtures or containing, in part, a proprietary chemical or drug. One prescription was for Castoria and California Fig Syrup, equal parts, with directions to take a teaspoonful every two hours.

In Boston there was secured the data from two of the best known druggists. In one, in which 14,895 prescriptions were filled in a year, 38 per cent were proprietary, in the second, in which 12,000 prescriptions were filled in a year, 48 per cent called for proprietary medicines.

Modern medicine has established the fact that specific medication for disease is very limited. The specific sera, used as antitoxins and bactericides, organotherapy in a very limited field, quinin in malaria, and mercury and iodids in syphilis, comprise the list. A rational use of drugs, preferably in simple form to stimulate or to maintain the physiologic function of organs embarrassed by unhygienic habits, by an acute infective process or partially crippled by a morbid anatomic process, is the chief reliance of the physician.

Palliation of suffering is an important therapeutic measure. The rational, careful and conscientious physi-

cian primarily attempts to make a definite diagnosis. The removal of the cause, when possible, is an important step with a rational management of the personal hygiene. The drug treatment may be a very important part of the management, and it requires a fine judgment to know when and what to give in disease, as well as when not to give anything.

The Pharmacopeia furnishes a list and description of chemicals and drugs, more than enough to meet the wants of the most ardent believer in drug therapy. A good pharmacist can furnish the official water, pill, powder, spirit, solution, elixir, tincture, fluid extract, syrup, etc., of the drugs prescribed. The Pharmacopeia gives the physician the complete and definite official mixtures. He will be able to furnish his patient with drugs at their true value. The pharmacist will not be obliged to pay a hundredfold price for the proprietary preparation, which, in the end, is assessed on the patient. Acetanilid may be bought for not more than from 25 to 30 cents a pound. If prescribed in the copy-right preparations it costs many times the trade price.

Scientific progress, professional integrity and character and economy demand the restriction of the proprietary medicine evil. To restrict it, the medical schools should teach the student, more fully and adequately, botany, pharmacology and therapeutics. The medical graduate must know how to observe and interpret the phenomena of disease, and he must know equally well the materials and how to use them with which he may combat disease. He should know pharmacology and prescription writing, he should know the therapeutic value and power of drugs and their limitations. With a proper fundamental knowledge of this kind, the daily experience will add valuable information in drug therapy which will not be disturbed by the alluring advertisement of the nostrum exploiter.

To overcome the present evil will require publicity. By this means we may be able to arouse the dormant good sense of our erring brother practitioner and induce him to use simple tried and official drugs. We must induce the physicians to attend medical meetings and to rub against their fellows. But at these meetings we must not permit the exhibition, under our auspices, of pyramids of proprietary medicines and stacks of more "literature" than is offered at the scientific sessions. We must discountenance the practice of the "faculty" and the practitioner in writing testimonials of the wonderful effects of these cure-alls.

We must induce our medical journals to stop advertising nostrums. The editors of the great journals of the country are to be numbered among the best members of the profession. If they choose to do so, they can permit the advertisement only of those proprietary medicines which furnish for publication, in the advertisement, an authentic, definite and complete formula. They should also edit the reading matter of allowable advertisements and prevent the abuse of overstatement and the publication of untruths. Secret mixtures and mixtures with incomplete formulas or with indefinite statements as to the constituents should be refused space in the reputable medical press. With the publication of accurate formulas the physician would be able to judge of the possible virtues of the mixtures. To most of us, mixtures with known formulas are objectionable. Disease is never quite the same in different individuals, and the morbid phenomena are not often expressed in the same form from hour to hour and day to day. The treatment must be modified to meet the varying prob-

¹ James J. Walsh, M.D., THE JOURNAL A M A, vol. xiv, No. 23, p. 1702.

lem of the morbid process This can be done much more helpfully with simple drugs than with intricate mixtures.

Secrecy is essential to the success of the nostrum evil. Publicity will kill it. Publicity will educate the physician and the public and teach them not to use secret mixtures which often contain poisonous chemicals or drugs which are kept secret for the purpose of assigning to them alleged virtues and that an extravagant price may be obtained.

Finally, I desire to express sorrow that the present status of the nostrum evil compels me to say a word of complaint of the medical profession. Many physicians to whom I have talked have expressed themselves as more or less guilty of prescribing proprietary preparations. All agree that it has been done thoughtlessly and that the practice has insidiously grown on them. Many have said that it is unnecessary, is detrimental to scientific medicine, and that the exposé of the Council on Pharmacy and Chemistry will have a most decided effect in educating the profession not to use nostrums.

100 State Street

Special Article

THE PHARMACOPEIA AND THE PHYSICIAN

CHAPTER XI

INTERNAL ANTISEPTICS

The great strides made in the use of antiseptics, after Lister had employed them in surgery with such brilliant results, led to the hope that they might be made available for limiting the development of bacteria in various parts of the human body. From time to time clinicians have reported favorable results from the use of internal antiseptics in such diseases as typhoid fever, but at the present time it is generally acknowledged that complete disinfection of the intestinal tract is impossible and that the treatment of constitutional diseases by means of antiseptics is possible only in a few isolated cases, for example, in malarial fever by quinin, in articular rheumatism by salicylic acid and its compounds, and in syphilis by means of mercurials. Quinin has been shown to have a peculiarly selective and destructive action on the protozoön which causes malarial fever, and perhaps mercury and salicylic acid may possess similar selective action against the agents producing syphilis and certain forms of rheumatism. It is no longer considered probable that there will be found any agent or group of agents capable of rendering the blood and tissues sterile to all or to any considerable number of bacteria, but it is admitted that we may yet find many agents, each exerting an influence analogous to that of quinin in malarial fever, we may limit ourselves, therefore, to discussion of the probable action of antiseptics on the alimentary canal and of the three substances just enumerated.

It is impossible to form a correct idea of the probable effect of an internal antiseptic without having at least some idea of the organisms on which it must act. Nuttall and Thierfelder took guinea pigs from their mother by Cesarean section under aseptic conditions, and fed one of them on sterilized food for thirteen days, during which it continued to thrive, but Schotelius found that chickens died of starvation when fed only on sterilized food. G. N. Stewart accepts Nuttall and Thierfelder's results as demonstrating that animals, including man, exist despite the bacteria which infect the alimentary canal from a few hours after birth until death.

Strassburger concludes from a review of the extensive literature pertaining to intestinal bacteria, that Nuttall and Thierfelder have shown that no single process of alimentation is absolutely dependent on bacteria, but that the chief function of certain of them, notably the colon bacillus, which is always abundantly present, is actually to destroy other bacteria and

thus to protect the host against those disease germs which may gain entrance to the alimentary canal. The destruction of all the bacteria in the alimentary canal at any one time, therefore, might prove fatal, in that any disease germs which chanced to gain access to the intestine could so multiply as quickly to destroy the life of the host.

The proof that bacteria do play some part in the process of digestion is found in the fact that man can digest the cellulose of delicate vegetables to a limited extent, though he secretes no enzyme capable of splitting cellulose, which, therefore, must be split by bacteria present which have been shown to possess that power. Then, too, certain crystalline bodies other than leucin and tyrosin have recently been found among the ultimate products of digestion, and as none of the known digestive enzymes are capable of forming these bodies they likewise must result from bacterial action.

While we must admit that bacteria are concerned in digestion, we have no positive information at the present time as to how important a part they actually take. It has been shown that the colon bacillus, which is universally present in milk, inhibits, to a certain extent, the action of putrefactive bacteria, and it is well known that untreated milk of good quality is more digestible than is the same milk after sterilization.

We are thus forced, by this and other like evidence, to conclude that it is by no means desirable to render the intestines sterile and that, instead of attempting intestinal antiseptics in the broader sense, we should seek rather to modify the flora in that region than to destroy it.

Various methods have been proposed, from time to time, for determining the relative degree of putrefaction taking place in the intestines, but at the present time it is not positively known what constitutes the best method at our disposal for doing this. The procedure most frequently employed, one which is considered to afford a fair estimate, in a large proportion of cases, consists in estimating the ethereal sulphates in the urine. Strassburger claims that weighing the bacteria after separation from the feces and drying affords the surest means or estimating the number of bacteria present. Others count the number of colonies which can be cultivated from a milligram of feces, but this has been shown to be unreliable. In view of the fact that laboratory methods are far from satisfactory in determining the number of the several varieties of bacteria present in the feces, the general practitioner will probably be obliged, for some time to come, to depend largely, if not entirely, on the clinical data presented by each individual case.

Without knowing the precise rôle played by the multitudinous bacteria of many species, we do know in various ways when undue activity of the putrefactive bacteria occurs, and certain symptoms give notice that excessive fermentation is taking place in the small intestine. A moderate increase in the number of colon bacilli tends to lessen the development of the

1 Tests made on the several constituents of milk show that they have no power to inhibit putrefaction, though such a power is unquestionably possessed by fresh milk. That this is due, at least in part, to certain bacteria normally present in the milk is shown by the fact that sterilized milk putrefies much more rapidly than untreated milk on the addition of the bacillus of putrefaction (*B. putrificus*) but if with the *Bacillus putrificus* the colon bacillus be added to sterilized milk, the milk acts as does normal milk, thus proving that the colon bacillus is actually capable of inhibiting the development of certain bacteria. It is, of course, possible that fresh milk also possesses antibacterial properties which are destroyed by the sterilization. These conditions help to explain why sterilized milk is not so wholesome as new milk of good quality. It must be remembered, however that milk is an excellent culture medium in which a great many bacteria are normally present, and that if it be allowed to stand in a warm place for some hours the micro-organisms multiply to such an extent that the milk is wholly unfit for use, and we do not wish to be misunderstood as implying that the colon bacillus is an unmixed blessing. While, during health, this micro-organism probably does not emigrate from the uninjured intestine it may do so in states of lowered general resistance, or in the presence of defects of the intestinal epithelium, and may give rise to blood infection, or more rarely to inflammations in various organs. The possibility that the bacillus of typhoid fever and kindred forms are only modified colon bacilli is of theoretical importance. Some authorities (Escherich and some others) deny that the colon bacillus is capable of rapidly becoming virulent. Different strains of the colon bacillus have different degrees of virulence, and it still remains possible that many cases of infantile colitis are caused by certain strains (e. g., the colicollitis of Escherich).

putrefactive germs, on the other hand, an intestinal catarrh, caused by excessive acidity resulting from the undue fermentation of carbohydrates by the colon bacillus, may be alleviated by lessening the carbohydrates of the food and consequently the medium on which the colon bacillus thrives.

Normal peristalsis, by hurrying the food through the small intestine, prevents undue development of bacteria, but diarrhea and irritant purgatives favor the development of bacteria by the increased amount of liquid which is present because of the increased secretion or diminished absorption. Thus more bacteria have been found after administration of calomel than were present before the drug had been given, though calomel is generally considered to be an excellent antiseptic.

While normal peristalsis limits the development of bacteria, the latter, in turn, liberate acids in the decomposition of carbohydrates, which probably supply the stimulus which sets up peristalsis. The normal digestion and absorption of food also tend to lessen intestinal putrefaction by lessening the amount of material which can serve as a culture medium.

It is important that the intestinal wall should be kept intact. When the intestinal mucosa is injured it fails to absorb the food products and the bacteria multiply rapidly. It has been found that many antiseptics injure the intestinal wall more than they do the bacteria, and, despite the fact that the antiseptic may be found in quantity in the feces when the bulk is small, it has actually permitted an increased growth of microorganisms in the small intestine when other conditions favored the bacteria and not the antiseptic action. Strassburger found just double the number of bacteria after the use of naphthalene, which has been considerably lauded as an intestinal antiseptic.

As suggested before, the simplest means of diminishing the number of putrefactive bacteria is by lessening the amount of the proteid of the food. Though it has been contradicted by the indirect evidence of urinary constituents, it has been shown that the bacteria of the intestines are very much reduced in number by the withdrawal of all food.

It was formerly supposed that the gastric juice of the stomach interposed a fairly effective barrier to the entrance of living disease germs into the intestine, but this juice has but little effect at the beginning of digestion, when the activity is slight, and toward the end, when the hydrochloric acid is nearly all combined with proteid. Some microorganisms, e.g., the tubercle bacillus, pass uninjured through the stomach more readily than others, e.g., the vibrio of cholera.

The effect of bile on bacteria is not positively known, but it is generally supposed that it does not contain any germicidal power, as some bacteria can be cultivated on bile, though not after the precipitation and removal of the mucus. The intestinal secretion does not possess any germicidal power. All these factors are important, since all of them—bile, gastric juice and intestinal secretion—have at various times been supposed to possess antiseptic properties, and it is necessary to know what results are to be expected from increasing the quantity of any or all of them.

Strictly speaking, the antiseptics of the alimentary canal should begin with that of the mouth, but this is more conveniently considered under local antiseptics. In view of the fact that the gastric juice does not interpose an absolute barrier to the ingress of pathogenic bacteria to the intestine, the proper care of the mouth and the limitation of its flora assumes an added importance, and there is no question of the fact that proper attention to the cleanliness of the oral cavity will greatly lessen the danger from intestinal infection.

The general tone of these varied statements may appear pessimistic, so far as faith in the efficiency of intestinal antiseptics is concerned, but so far from that being the case they are intended to further demonstrate that our main reliance must, after all, be placed in guarding against the entry of disease producing organisms into the alimentary canal and their destruction before they have passed beyond the reach of local treatment. After they have once gained admittance to the intestine the best means of limiting their development must be sought in regulating the diet and careful attention to the general condition.

If we are unable to destroy all or even any appreciable num-

ber of the bacteria of the intestine, it is consoling to know that some of them are our allies instead of our foes. It is admitted by nearly all authorities that it is impossible to influence the bacillus of typhoid fever by antiseptics. It has been shown that a milk diet hinders the development of putrefactive bacteria, and many consider that the main benefit derived from a milk diet in typhoid fever is due to its effect on bacterial development. Fortunately, the *Bacillus typhosus* does not form spores and the bacillus itself is easily killed outside of the body, heating in water even to 75 C (167 F) for ten minutes greatly lessens its vitality.

It is practically impossible in the space at our disposal even to summarize the results of the hundreds of investigations dealing with the question of intestinal antiseptics. Those experiments which appear more nearly free from error point to the fact that we can not secure direct antiseptic action by chemical antiseptics in the intestine without injuring the intestinal wall, or at least materially reducing those conditions which naturally limit bacterial development, more than we injure the bacteria. The net result, therefore, is usually an actual increase of some species and a diminution of others. Clinical experience seems to prove conclusively that the mild mercurous chlorid, or calomel, is beneficial in those cases of indigestion which are characterized by that train of symptoms which includes a feeling of dullness, lassitude, headache, nausea and anorexia, the condition being popularly termed "biliousness." It is possible that the antiseptic action of the calomel, by limiting the development of other species of bacteria, gives the colon bacillus a chance to multiply, the increased amount of fluid in the intestine having been found particularly to favor its development. These, in turn, may then modify digestion or serve to restrict the development of putrefactive bacteria, and, as we have seen, they favorably influence peristalsis, which in turn is one of the natural means of elimination of bacteria. The increased peristalsis caused by the calomel lessens the opportunity for absorption of the bacterial toxins which give rise to the train of symptoms mentioned, this lessened absorption may be due in part to the action of calomel on the wall of the intestine. This merely suggests the many sidedness of an operation that appears at first glance to be a very simple one. The action of the solution of hydrogen dioxide in the mouth and throat has been discussed under local antiseptics. Owing to the rapidity with which it is decomposed by mucous membranes it can exert but little germicidal action in the stomach and absolutely none in the intestine or general circulation, indeed, it is so rapidly decomposed by the blood that it speedily causes death by embolism when introduced into the circulation. The same holds true of potassium permanganate, and it is probable that all antiseptics that depend for their action on the liberation of oxygen would be decomposed in the same way when brought in contact with the mucous membranes of the mouth and throat or the organic material necessarily present in the stomach.

ACIDUM HYDROCHLORICUM—U S.—Hydrochloric Acid, or muriatic acid, contains 31.9 per cent of absolute hydrochloric acid. It is seldom used in medicine in this country, the preference being usually given to

ACIDUM HYDROCHLORICUM DILUTUM—U S.—Diluted Hydrochloric Acid, containing 10 per cent of absolute hydrochloric acid. This acid undoubtedly exerts some germicidal action in the stomach when present in sufficient amount, and its action may indirectly influence the intestinal flora. It has been stated that the hydrochloric acid of the stomach becomes bound to albumin during digestion and then exerts no antiseptic influence, but we have also seen that normal digestion is one of the surest means of controlling the bacteria of the intestine, and how a deficiency of that aid may cause fermentative dyspepsia, with an enormous increase of bacteria, which may become virulent. It may be mentioned in this connection that, according to some recent experiments on man, the usual dose of hydrochloric acid, 1 cc (15 minims) is entirely too small to supply the deficiency existing in many cases, and as much as 200 cc (6 fluid ounces) of 0.4 per cent acid, corresponding to 10 cc of the official dilute acid, has been given with decided benefit when the usual dose or less had given no appreciable result. It must always be given diluted with a

large amount of water. It should be remembered that mineral acids are to be taken through a tube to avoid injury to the teeth, and that the mouth should then be rinsed with water, or, better still, with a mild alkaline solution, such as lime water or a very dilute solution of sodium bicarbonate.

NAPHTHALENUM—U S—Naphthalene, naphthalin and **BETANAPHTHOL**—U S—Betanaphthol, or naphthol, have been highly recommended as intestinal antiseptics. As we have seen, they do not usually lessen the number of bacteria, though they may exert a favorable, modifying action. These substances have been used in the treatment of diarrhea with excessive putrefaction.

The average dose of naphthalene is given as 0.12 gm. (2 grains), and the average dose of betanaphthol as 0.25 gm. (4 grains). It has been suggested that naphthalene must be converted into betanaphthol before it can exert its antiseptic action, but even this point has not been satisfactorily determined.

There are a number of nostrums on the market consisting of betanaphthol combined with astringents, but in view of the complex nature of the problem with which we have here to deal it is preferable by far to employ the official substances, combining them as seems indicated in each case. To do this it is merely necessary to calculate the relative amount of each powder to be given at a dose and to dispense them either separately or in a single powder or a mixture.

Betanaphthol and bismuth subnitrate or subcarbonate may be combined somewhat as follows:

R Bismuthi subnitrat	3i	4
Betanaphthol	gr xv	1

M Sig—To be made into ten powders, one being given every two hours in diarrhea with foul smelling feces.

R Bismuthi subnitrat	5ss	10
Betanaphthol	3ss	2
Syrupi acaciae	3iiss	50
Aque camphorae to make	3ii	100

One teaspoonful to be given, after shaking, every two hours.

The number as well as the variety of substances that have been suggested from time to time as intestinal antiseptics may perhaps justify a more extended review, we can do little more, however, than simply enumerate some of the official substances that have been used and are even now being lauded as valuable and efficient remedies in the treatment of the several gastrointestinal disorders.

The use of antiseptics in the treatment of typhoid and typhus fevers was first suggested in Germany more than thirty years ago and the arguments that were offered at that time appeared so plausible that internal antiseptics at once sprang into vogue. Among the more popular were the following:

IODUM—U S—Iodine is very seldom used as such at the present time, although it is official.

Average dose 0.005 gm. (5 mg., 1/10 grain)

LIQUOR IODI COMPOSITUS—U S—Compound solution of iodine, better known as Lugol's solution, contains about 5 per cent of iodine and 10 per cent of potassium iodide in distilled water. This was at one time a favorite method of administering iodine.

Average dose 2 c.c. (3 minims)

TINCTURA IODI—U S—Tincture of iodine is virtually a new preparation and combines the strength of the former official tincture with the water soluble properties of the unofficial compound tinctures or soluble iodine solutions. It contains 7 per cent of iodine and 5 per cent of potassium iodide in alcohol.

Average dose 0.1 c.c. (1 1/2 minims)

Iodine and the water soluble preparations of iodine were formerly much lauded as intestinal antiseptics, and even at the present time, though, as was shown in the introductory portion of this article, the practice is now obsolete, they are frequently exploited by manufacturers of nostrums as being little short of the ideal. The form in which iodine was formerly largely used was in connection with carbolic acid or phenol, thus:

R Tinct. iodi	3iiss	10
Phenol	m lxxv	5

Sig—0.03 to 0.10 c.c. (1/2 to 1 1/2 minims) three times a day in water.

Phenol itself is now seldom employed, or even recommended, as an intestinal antiseptic, but the official phenol sulphonates, better known as sulphocarbolates, still have a number of ardent advocates.

SODII PHENOLSULPHONAS—U S—Sodium Phenolsulphonate, the sodium sulphocarbolate of the previous Pharmacopeia.

Average dose 0.25 gm. (4 grains)

ZINCI PHENOLSULPHONAS—U S—Zinc Phenolsulphonate, is rather more active than the former, combining the astringent properties of the zinc with the antiseptic properties of the phenolsulphonic acid.

Average dose 0.12 gm. (2 grains)

Both the official salts are readily soluble in water and may be given in solution. Calcium phenolsulphonate is being lauded at the present time as an intestinal antiseptic, but there is no reason to believe that it offers any advantages over the sodium salt, and it is probably quite as harmless.

Of the other official derivatives or substances coming directly under the same classification as phenol we have:

THYMOL—U S—

Average dose 0.12 gm. (2 grains),

CREOSOTUM—U S—

Average dose 0.2 c.c. (3 minims),

GUAIACOL—U S—

Average dose 0.5 c.c. (8 minims),

GUAIACOLIS CARBONAS—U S—

Average dose 1 gm. (15 grains),

ACIDUM SALICYLICUM—U S—

Average dose 0.50 gm. (7 1/2 grains),

PHENYLIS SALICYLAS—U S—Phenyl Salicylate, better known by its formerly official title, salol, is even now considered as being among the few really desirable or available internal antiseptics. It occurs as a white crystalline powder, having a faint but characteristic odor and a slight, rather peculiar taste, it is only slightly soluble in water and, therefore, does not become dissolved to any appreciable extent in the juices of the stomach. It is decomposed, however, by the alkaline liquids of the intestine into its constituents, phenol and salicylic acid, and thus becomes available as an antiseptic. It is said to be particularly useful in preventing the infection of the kidneys by the *Bacillus typhosus*.

Average dose 0.50 gm. (7 1/2 grains)

HEXAMETHYLENAMIN—U S—Hexamethylen tetramin has been discussed at greater length under diuretics (chapter v). This substance has also been recommended as an available intestinal antiseptic, but, as noted under diuretics, the ultimate products of its decomposition are largely, if not entirely, eliminated by the kidneys, and it no doubt finds its greatest field of usefulness in preventing possible infection of the urinary organs.

Average dose 0.25 gm. (4 grains)

It is manifestly impossible to discuss or even to mention all the agents that have been, or are, employed as intestinal antiseptics. Many of the remedies that are recommended as intestinal antiseptics are also useful as anthelmintics. Notable among these is thymol, which has been referred to frequently of late as being a useful as well as an efficient anthelmintic and tenifuge.

Though many efforts have been made to treat tuberculosis by means of internal antiseptics, the favorable influence which has so far been observed is to be attributed to the beneficial effects produced on the tissues, and not to any direct bactericidal action produced by the antiseptics themselves. Of the remedies that have been suggested for this purpose, creosote and guaiacol continue to be used, probably with some benefit.

The whole problem, however, appears to concern curative effect and treatment rather than antiseptics.

Few articles in our materia medica possess any action so specific as that shown by cinchona or its chief alkaloid, quinin, in the treatment of certain forms of malarial fever. Cinchona bark itself owes its introduction into Europe to the fact that it was found to be efficient in the treatment of fevers.

2. The following has been used to a considerable extent in the treatment of gastric fermentative dyspepsia particularly when accompanied by nervous disturbances:

R Sodii bromidi	gr v	3
1 c.c. of iodine	gr ii	1
Aque amari q. s. ad	3ii	10

This dose to be taken after meals in half a glass of water.

A PIECE OF STEEL RETAINED IN THE EYE FOR SEVEN YEARS

LOUIS W FLANDERS, MD

DOVER, N H

Patient—Mr J G, aged 12, was sent to me Dec 21, 1905, for treatment of his left eye. He gave the following history.

History—Seven years ago, while striking with a stone chisel a bit of steel flew from the tool and struck him with great force in the left eye. He went to an infirmary where they found the hole, but could not find the bit of steel. After six weeks of inflammation the eye quieted down, and in six months after the injury the sight was reduced to perception of light only. From that time he had occasional attacks of irritation with blurring of the sound eye, but nothing to amount to anything until the night before he appeared for treatment. He spent that night, as he graphically expressed it, "on my hands and knees in bed shuddering with pain."

Examination—I found a marked irido-cyclitis and advised immediate enucleation. The patient demurred, and I gave him until the following morning to decide, and in the meantime the treatment consisted of instillations of atropin, an ice bag to the eye, and morphin enough hypodermatically to make the pain bearable. He passed a restless night and consented to enucleation the next morning.

Examination of Enucleated Eye—Section of the enucleated eyeball disclosed the following conditions. Scar of the cornea in the superior quadrant, a round hole in the iris just behind the scar, less cataractous, vitreous completely disorganized. In the inferior quadrant of the ciliary body there was a black object about 3 mm long by 2 mm wide. This turned out to be the bit of steel which had oxidized so that the outer shell came away like charcoal, leaving a solid nucleus about one-third of the original size.

Remarks—It seems remarkable that a foreign body could have lain in the ciliary body, of all places, for seven years before giving rise to marked symptoms.

A CASE OF TETANUS TREATED BY INTRA- SPINAL AND INTRANEURAL INJECTIONS OF ANTITOXIN

E DUNSTER KREMERS, MD

HOLLAND, MICH

The following case of tetanus, cured by the antitoxin treatment, is reported as an addition to the list of those already published as treated by this method.

Patient—J V Z, aged 32, male, American, married.

History—On Nov 23, 1905, while working near the barn, the patient stepped on a rusty nail, which penetrated the left foot for a depth of about three quarters of an inch. The wound bled freely. It was dressed with an external application of one of the common clay and glycerin poultices and healed without any trouble. On December 1 the man worked out in the field in cold weather and became thoroughly chilled. He soon began to complain of stiffness in the chest, which increased and spread to the back, legs and jaw. This was on the ninth and tenth days after the injury, and the stiffness was thought to be due to rheumatism. On December 3 and 4 he noticed that he had great difficulty in eating and that this trouble was growing worse. On December 5 he passed what he describes as a terrible night. He suffered repeated severe convulsions and was drawn back in opisthotonos.

Treatment—When seen by Dr E De Spelder at 5 a m he was almost exhausted and was given morphin, gr 1/4, hypodermically. He was seen again at 11 a m and his condition was about the same. At this time Dr H Kremers saw him

and gave morphin, gr 1/2, hypodermically, and antitoxin, 2 dr, subcutaneously. The man's temperature was 100 and pulse 100. I saw him first at 5 p m on that day. He was sitting up in bed in general rigidity, jaw almost locked and temperature 101.5. Under chloroform anesthesia I introduced a needle into the spinal canal under the third lumbar vertebra and injected two drams of antitoxin. One dram was also injected into the thigh over the sciatic nerve. He was given by rectum chloral gr xxxv, potassium bromid gr xx. After this he slept for three or four hours and was kept quiet all night with morphin and large doses of chloral and bromid, which he swallowed through a soft rubber tube.

Course of Disease—December 7 the jaw was a little stiffer. At 3 30 p m, under chloroform anesthesia, I exposed the left sciatic nerve high up under the gluteal fold. The nerve was easily found and injected with 30 minims of antitoxin. A silk ligature was passed under the nerve to facilitate finding it and the wound partially closed. The wound in the foot, which had healed, was incised, disinfected with carbolic acid and iodin, equal parts, and packed with iodoform gauze. At 8 p m, after moving the patient in bed, he went into a severe general convulsion with marked opisthotonos, cyanosis, cessation of respiration and fluttering heart. He was at once given chloroform and kept anesthetized until a hypodermic of morphin, gr 1/2, had time to take effect, and then he was kept stupid the entire night.

On December 8 the patient had many small spasms, but no more severe ones. Placing a thermometer in the axilla or the drinking tube to his lips would bring on a spasm. During the day his temperature went up to 101.5 in the axilla, but he was kept quiet under drugging. At 5 p m the sciatic nerve was re-exposed and injected with 30 minims of antitoxin. A large amount was also injected into the foot. During the night the pulse became unsteady, running up to 135, and at the same time respirations went down to twelve to the minute.

On December 9 the patient was chloroformed once more and the nerve re-exposed. It was intended to inject the nerve, but when brought out of the wound it appeared very red and there was a piece of the sheath a half inch in diameter which had been torn away. On this account, fearing to injure the nerve, and since the patient was not growing worse, the antitoxin was injected into the tissues.

From this time on the condition steadily improved, although the spasms and trismus continued for several days, gradually growing less frequent and less severe. He was kept as still as possible in a darkened room and given morphin, chloral and bromids to keep him quiet. The jaw could be separated only a quarter of an inch, but the patient could be fed with a soft rubber tube. He drank large quantities of milk and water. The temperature slowly dropped with the trismus and rigidity, and on December 25 he was out of the house. The wound in the thigh healed rapidly and there was absolutely no disability in the leg except that the rigidity was slower to disappear from that side.

This case may be regarded as a rather subacute one, as the symptoms were slow in coming on and the jaw was not completely locked. It is hard to say, therefore, just how much influence the antitoxin had in the cure, but the condition was growing worse at the time the injections were first given and it is very probable would have gone on to death. The cases reported by Rogers¹ go far to show that antitoxin will cure tetanus if used in the manner he describes, even if used without any other treatment, and this case may be added to the list as recovering under the same treatment. As pointed out by Rogers, the chloroform is an important part of the treatment, as it reduces, for a time, the patient's excitability and relieves him of a great deal of his suffering. Chloral, also, in this case was found to be more effective in reducing the number of spasms than morphin. This case also shows that there is no great danger in the treatment itself, because, even though the nerve appeared deeply injected and wounded, there was neither pain, numbness nor paralysis in the affected leg. The treatment was all done in the patient's farmhouse, and this shows that it is an easy matter to carry out.

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SATURDAY, MARCH 10, 1906

THE FREE DISPENSARY EVIL

Some time since we mentioned the lack of control of free dispensaries in almost all the states. We referred to the fact that New York had made an attempt to regulate dispensaries, but that the law passed in that state had been aimed primarily at the abuse of free clinics by well-to-do patients and that it only incidentally affected the more important question of the character of medical care furnished in free clinics.

This law has now had six years' trial, and at a recent meeting of the New York County Medical Society, held in New York City, the working of the law was reviewed by physicians and by members of the State Board of Charities and of the City Charity Organization Society. The report of the conference is interesting and enlightening from several points of view. In the first place, it seems to be generally conceded that the law has not attained the object for which it was framed, namely, "to remove the dispensary evil, which was commonly held to be the unrestricted multiplication of dispensaries and the indiscriminate bestowal of medical charity alike on the well-to-do, the self-supporting and the indigent." That the law has failed to remedy this the lay speakers, officials of charitable societies and inspectors for the state board make clear, although there is an attempt on the part of some dispensary physicians to claim that the evil has been lessened. On the other hand, it appears to be undeniable that, to a very great extent, the secondary object of the law has been attained. The licensing, inspection and control of dispensaries by the state board, according to the testimony of laymen and physicians alike, seem to have resulted in great improvement in the conduct of these institutions. It may be well to review briefly the provisions of the law in these respects.

The New York law requires all dispensaries to be licensed by the State Board of Charities. No dispensary may be opened unless it can be shown that there is need for such an institution in that locality and that when it is established it will be properly maintained. Suitable buildings must be provided, drug stores or tenements may not be used, seats for all applicants must be provided, cleanliness must be maintained and a matron or female nurse must be present at all gynecologic examinations or treatments. The apothecary must be a licensed pharmacist or a medical graduate. Regularity of service is insisted on and also strict rules regarding

the isolation of contagious diseases. The board is empowered to revoke the license for cause, and has done so when necessary.

These provisions are certainly not unreasonable and it should be possible to enforce them. That New York has succeeded in so doing is evident by the reports read at this meeting.

In 1899, previous to the passage of the bill, dispensaries were in operation in tenement houses, drug stores and dilapidated old buildings and shanties. One, which reported treating 48,000 patients annually, was conducted in a wooden structure 12x20 feet and 8 feet high. In another water for physicians and patients was brought in a bucket from the next building. The last report of the board showed that 109 out of 119 dispensaries inspected were found in location and equipment to meet the requirements of the law. There has been an actual diminution in the number of dispensaries in spite of the steady increase in New York's population. In 1899 there were 136 dispensaries, in 1904 only 119, although the population of New York City has increased 150,000 annually during that time. In the matter of the proper conduct of gynecologic clinics, the keeping of records, and the regularity of attending physicians, the board reports decided improvement.

Undoubtedly, then, the law has been of marked benefit in raising the character of medical care in free dispensaries, and from this point of view it may be held up as a model to other states. But why should it have failed in remedying the evil for which it was specially framed? The answer is interesting, for it seems that while the medical profession was responsible for the framing of the law and is, of course, the chief sufferer from the abuses which it sought to abolish, it is the medical profession which defeats and nullifies it. Practically no genuine effort is made to weed out from a dispensary clinic the patients who probably are able to pay a physician's fee. Physicians in charge of dispensary clinics take pride in having a large number of patients on their days. Moreover, the well-dressed, prosperous-looking patient may prove to be the most interesting case of all. Hospital superintendents are quoted as saying that if they should restrict the dispensary cases to those who are clearly too poor to pay a physician the clinics would be so reduced that it would be impossible to retain the best specialists on their staffs. Dispensary registrars report that any attempt to use strictness in the admission of applicants meets with disapproval from the physicians. There is another motive sometimes encountered in privately conducted dispensaries, namely, the pecuniary gain represented by even a very small fee. Dr. G. C. Sturges mentioned instances of dispensaries charging a ten-cent fee which made from \$1,200 to \$3,000 a year.

Undoubtedly the exclusion of unworthy applicants from free clinics is a difficult if not an impossible task. What is to be the standard of "worthiness?" Any at-

tempt to decide on a patient's standing by his clothing, general appearance intelligence, etc., ignores the fact that the experienced beggar always knows how to dress and act for the part. Dr E. Le Fevre reported investigating personally thirty-five intelligent, well-appearing applicants for free care who all proved worthy, being people who had already paid their physicians all they could afford and yet needed long courses of treatment. Many a general practitioner is obliged to send to a dispensary patients of his own who need treatment by specialists for which they could not pay.

Then there is the question of dispensaries maintained for teaching purposes in connection with medical schools. Those connected with such schools are seldom anxious to limit the number of patients attending. Moreover, it would seem as if patients visiting such dispensaries and allowing themselves to be used for purposes of demonstration should hardly be regarded as free cases, for in a sense they pay for their treatment.

When we protest against the "abuse of the free dispensary" it is well to remember that we are ourselves chiefly to blame for this abuse, and it would be foolish for us to seek for a remedy through legislation until we are prepared to obey the law after it is passed.

PASSIVE CONGESTION IN THE TREATMENT OF INFECTIONS

It is probable that in the treatment of many diseases the physician will never be more than the assistant of Nature. A two-fold tendency is to be seen in the therapeutics of recent years, on the one hand an effort to replace some of the older substances by less toxic products of chemical synthesis, and on the other a decided effort to utilize physical therapeutics. Both tendencies are in principle good, but both may be abused. Physical methods especially tend to act by encouraging or hastening natural processes of cure.

Among the advocates of certain forms of physical therapeutics must be mentioned the German surgeon, Bier, who for years has been extolling the value of passive congestion in the treatment of chronic joint affections. A little over a year ago this observer published an article in which he recommended the use of passive congestion in acute infections also. Such conditions as panaritium, furuncles, suppurative tenosynovitis, and acute osteomyelitis were suggested as being amenable to this form of treatment. The methods to be employed were essentially those previously described in the treatment of chronic affections. When the infection was localized in an extremity an elastic bandage could be used, if very restricted treatment was desired, or if the disease was on the trunk or head, a suction apparatus of glass with a rubber bulb exhaust was employed. As in previous articles, Bier laid stress on the necessity of a red hyperemia in the treatment of these cases. A complete stoppage of the venous circulation, with the resulting blue hyperemia, is regarded by him as productive of more harm than good.

Numerous articles have appeared in the past year¹ which support Bier's contention that in passive hyperemia we have a valuable means of combating acute infections. Recently Colley, Herhold and Mindes² have published commendatory articles. The reports show that certain forms of acute infection are more amenable to this treatment than others. In panaritium the application of the rubber bandage seems to be followed in most instances by rapid disappearance of the pain, a smaller incision is necessary (passive hyperemia does not take the place of incision), and the time of healing is materially reduced. Furuncles also seem to be especially suited to this form of treatment, when incision is necessary it need be very small, and if this form of treatment be instituted early enough the process may often be cut short. In phlegmons, particularly those communicating with tendon sheaths, smaller incisions are needed, packing is dispensed with, and in most cases the resulting limitation of motion seems much less than under ordinary surgical methods. In cases of osteomyelitis recovery frequently occurs without operation, and those patients operated on have a shortened period of illness. According to Colley, the method of treatment has a great future in the treatment of certain chronic forms of skin disease, a fact which he seems to have discovered accidentally in treating an individual who suffered from an infection complicating a chronic eczema.

The method of action of this form of treatment is of interest. It certainly does more than merely dam back the venous blood. According to Bier, the lymph stream is also interfered with during the period when the hyperemia is maintained. When the constricting band is removed, however, there is a great increase in the circulation of both blood and lymph. According to Noetzel, the fluid which is present in an artificially produced edema, such as Bier's method induces, is very strongly bactericidal. It is probable, too, that the simple dilution of toxins by the edema fluid plays a part in the process, and that the presence of leucocytes in the fluid is also a factor. The method is then simply a way of assisting Nature, it causes an increase in the flow of lymph, a condition which, as Wright has elsewhere shown, is of great importance in infections, inasmuch as it allows bacterial toxins to get into the circulation and to stimulate the formation of antitoxins. The inflammatory edema which Nature produces doubtless has much the same effect as the artificial edema produced by Bier's method, but once it has taken place there is practically no circulation in the fluid such as is produced by the intermittent production of passive congestion. Hitherto this method of treatment has not been adopted to any extent by American physicians, though the published accounts of its value are certainly encouraging.

¹ See abstracts in THE JOURNAL A M A, April 1, 1905, p 1075, and also pages 471, 473, 550, 621, 625 and 691 of the current volume.

² Münch med Wochtt, 1906, vol III, p 257.

ANEMIA IN PORTO RICO

The peculiar and pitiful anemia in Porto Rico is caused by hook worms or *uncinaria*. "Porto Rican anemia" is simply another term for *uncinariasis* or *ankylostomiasis*. Physicians in northern parts see so little of this disease in their practice that it is at first a little difficult for them to grasp the extent, the significance, and the misery of this disease in Porto Rico and other tropical countries.

In March, 1904, a commission was appointed for the study and treatment of anemia in Porto Rico, and reference has been made in these columns to the results of its work, which was deemed of such importance that the Legislative Assembly in 1905 appropriated \$15,000 to continue the commission (Igaravidez, King, Bashford). The preliminary report of this commission, covering the period from June 1 to November 30, 1905, is at hand. A brief glance at some of the phases of its work will show the benefit practical methods based on scientific knowledge may bring to human sufferers in countries like Porto Rico.

The commission organized a central station and several substations for the microscopic diagnosis and the treatment of patients with *uncinariasis* and for the instruction of the people as to the nature of the disease and the means of its prevention. In all 18,865 patients were treated, 84+ per cent were cured or practically cured (several hundred cases being still under treatment), only 33+ per cent of the total number died.

Thymol seems to be the favorite drug and the commission expresses the belief that five consecutive doses of thymol or beta-naphthol are "sufficient, usually, to bring the patient, if not to a technical cure, at least to the assurance of a practical cure." The specific treatment of "Porto Rican anemia" is thus definitely established. "The long list of 'sure-cure' patent iron pills, powders, and blood and nerve restorers, so dearly paid for by the unfortunate and credulous 'jébaro,' paid for, it should be remembered, from the earnings of a class said to be starving in poverty, is a list too long and too disgusting to contemplate without anger and a sense of shame." The use of iron as a *sine qua non* in the treatment of postuncinarian anemia is being abandoned in Porto Rico, and the vendors of patent ferruginous tonics should cease baseless exploitation of their wares.

According to the observations of the commission, 99 per cent of all who harbor *uncinaria* receive the infection through the skin, usually of the bare feet, from contact with soil or water loaded with larvae. "Ground itch" or

Mazamorra is the first sign of infection and, if repeated or severe *uncinariasis* may follow, and the patient in his turn becomes a menace to public health. The coffee plantations offer most favorable opportunities for infection of the soil by feces. Based on considerations, most briefly indicated of this nature, the commission holds that success of the campaign against *uncinariasis* in Porto Rico involves the treatment of all infected persons

in order to "render innocuous the feces of thousands who will continue to inoculate the soil in spite of prayers, lectures, advice, coaxing and even the prohibition imposed by the law." The wearing of shoes and the provision of latrines or even pits, adequately supervised, for defecation are additional measures that must be pushed to the utmost. We see that *uncinariasis*, now that we know the nature and the manner of spread of the disease, has become a preventable (one is tempted to say, easily preventable) disease. The magnificent work of the Porto Rico commission must be continued and extended.

BUSINESS METHODS AND PROFESSIONAL MORALS

Recent investigations into business methods have unearthed a degree of corruption which is almost incredible to those unacquainted with the conditions and which have been destructive of confidence in the integrity of the modern commercial world. With no intention of self-righteous boasting and no desire of condoning unjustifiable practices, we are proud to believe that the medical profession is freer from graft than any other equal number of men in the ranks of a profession or business. And this is as it should be. The relation of a patient to his physician is a most intimate one, and one in which implicit confidence is the very foundation of the relationship. The patient puts his life and his health unhesitatingly in his physician's hands, he feels that even if his physician lacks skill or needs assistance in an emergency he at least is honest and will do what seems best for the patient's interests. But it would be remarkable, considering the almost universal prevalence of "graft," if some doctor did not abuse this relationship. Thus he does in the so-called division of fees, a species of graft that we are compelled to acknowledge does exist, although undoubtedly it is extremely rare. While there is a probability of any of this kind of business going on it demands that we give thought to the matter. It is something we can not afford to treat in an ostrich fashion.

In his retiring address as president of the Syracuse Academy of Medicine Dr. T. H. Halsted brought out in a most forceful way some important truths with regard to this evil. He pointed out the importance of the position of trust and confidence occupied by the members of our profession to the public, and referred in a forceful manner to the abuse that some had made of the privilege in the species of graft referred to above. He said that the dividing of fees, without the patient's knowledge, is a most dishonorable transaction. If the fee division be done with the patient's knowledge then there is no dishonesty in the transaction. The patient has relied on the advice of his physician in selecting the most competent consultant. He assumes that his physician knows the best man, and without question accepts his advice. Did he know that his physician was considering, in addition to the con-

sultant's medical qualification, the question as to how much of the fee he was to receive the patient would probably feel that his doctor's advice might not be wholly disinterested.

The family physician should stand between the surgeon and his patient, looking after the latter's interests and using his judgment as to the necessity for an operation. He can not permit his judgment to be influenced by financial consideration and if he does he betrays the patient who has placed his confidence in him. A man who permits himself to accept from such a surgeon, consultant or specialist a division of the fee or a commission without his patient's knowledge inflicts an injury on his character which sooner or later will tell on his reputation because these things which cause a moral deterioration have a way of showing themselves unconsciously. Now, what of the consultant who divides the fee or pays the commission? To begin with, he is taking an unfair advantage of his colleagues, competing with them not on a basis of professional skill, character and attainments, but he is secretly actually paying money to physicians to have their cases referred to him and diverted from his more honorable colleagues who expect recognition on professional merits alone. This may be a shrewd method of getting lucrative practice, but it has its disadvantages. Such a man thinks too much of his fee, his judgment gets warped, and before he knows it he finds himself in the habit of wondering how much money can be gathered from the patient, rather than what is best to do for him. The physician who has called him in consultation must frequently be in doubt as to how much reliance can be placed—with safety to the patient—on his advice. Each—the payee and the payor of the commission—loses confidence in the other. The patient would undoubtedly question the advice did he know of the method pursued—and some patient will find out—some time.

He who adopts this "graft" makes of his profession a dishonorable business, with the inevitable result of developing his money-making instincts at the sacrifice of professional skill, acquirements and judgment, and it can be but a matter of time until his reputation—one of the best assets—is gone, and he finds that while he has been getting a practice, his slower, more honest competitor has been building on a surer foundation and has been establishing a reputation. *The one has been deteriorating in his moral fiber from the beginning, the other has been gaining strength.* So that, in the long run, it will be found that in our profession, as everywhere else, the old aphorism that "honesty is the best policy" still holds true. All surgeons, or practitioners of specialties, are only too well aware of the truth of these statements.

No doubt this system of graft had its origin in the existence of an unfair discrepancy between the size of the consultant's fee and the fee of the faithful physician and general practitioner. With all due allowance for the value of superior ability and experience and the high cost of long years of special training, some consultants charge

fees which, compared with the fee of the general practitioner, must seem excessively large. But this has nothing whatever to do with the matter, or, if it does, *let the division be made, but with the patient's knowledge.* It is certain that many physicians are not receiving the income which they should considering the irregular hours and nerve wearing work in which they are engaged. Yet the best way to increase the income is not through practices of the kind mentioned, but by a united effort to raise prices so that a living income may be earned. The advantages of a united medical profession must be evident to all in this as in other connections and we hope that by such united effort a better financial condition may be brought about, and this without the sacrifice of honor in any respect.

CANCER RESEARCH

Investigations into the origin of cancer and into other mysteries connected with this obscure disease are being earnestly prosecuted in all parts of the civilized globe. Edinburgh has contained for some time investigators eminent as would-be solvers of the cancer problem, among these may be mentioned Russell and Stiles.

The latest contributor to the subject is Dr John Beard,¹ lecturer in comparative embryology in the University of Edinburgh. From his study of fish he concludes that aberrant germ cells exist in all parts of the body, each of which, under unknown conditions, may give rise to a cancer, which is thus essentially an asexual structure. Further, Dr Beard asserts that even in the development of man himself there is a brief but not insignificant stage, during which an asexual structure is produced. In short, that "alternation of generations" (alternately sexual and asexual) which is so familiar in many of the lower animals and plants, has not been entirely suppressed. Dr Beard is of the opinion that he will discover the cause leading to the arrest of development of the asexual structure. If, as he surmises, a malignant tumor be but another asexual structure, it might be controllable by whatever cause controls the normally produced asexual structure. Dr Beard thinks that he has, to a certain extent, been able to do this. Rather more than a year ago he demonstrated that in the case of the fish the arrest of development of the asexual stage and the disappearance of the asexual structure coincide with the commencement of the activities of the pancreas. If the secretion of the pancreas be absent the asexual structures of the fish do not degenerate. The constituent in this secretion with which we are most familiar is trypsin. Dr Beard believes that in mice with experimental cancer he has been able to arrest the disease by means of trypsin. Relatively large doses were given by inoculation, without visible injury to the body cells, while the cancer cells simply crumbled away. Trypsin has already been administered in very modest doses

¹ British Med Jour, Jan 20, 1906, abstract in THE JOURNAL A M A, Feb 17, 1906, p 544

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to human patients, the effect being an apparent prevention of the recurrence of cancerous growths after surgical operation. Dr. Beard, arguing from his studies in embryology alone, holds the view that trypsin will be found to be perfectly harmless so far as the living body cell is concerned. The argument in favor of the value of trypsin in cases of malignant tumor is that the living body is a sexual product, and that whereas it has a destructive action on asexual products, it has no power whatever over the cell products of sexual generation. Dr. Beard terms trypsin the architect of the soma.

So many assertions in recent years have been made of cures for cancer, many, if not most, of which have been scandalous and unblushing frauds that men of science are now very chary of accepting any such statements. Naturally, until the cause of malignant growths is discovered, it would be idle to expect a rational and radical cure. There can be no doubt, however, that more or less satisfactory progress is being made in regard to cancer research, and at any rate the deductions of a man of the scientific rank of Dr. Beard are entitled to respectful consideration. It is to be hoped that still more encouraging reports will be forthcoming from the Edinburgh laboratories in the near future respecting Dr. Beard's investigations.

"THE COMING CONQUEST OF CANCER."

The interesting embryologic studies of Beard and his deductions therefrom, anent cancer, referred to above, have been utilized as the basis for more or less sensational and overdrawn statements in the lay press. An article in *Harper's Weekly*,¹ by C. W. Saleeby, M.D., concludes with the following announcement: "It seems more than probable that in trypsin has been discovered, for the cancer cell, that specific poison which must exist for every cell. Only the philosophic few could have guessed for a moment that Dr. Beard's long and famous researches would ever enable him—as they would, indeed, appear to have enabled him—to place in the hands of the physicians a veritable cure for cancer."

Now, do the facts at hand really justify this startling conclusion? Beard holds that in fishes aberrant germ cells exist in all parts of the body, and reviews in a somewhat more definite and modified form Cohnheim's hypothesis of the origin of tumors, more particularly cancer, in persistent embryonal cells. In fish the cells in question disappear as the pancreas assumes its physiologic activity, hence the suggestion already acted on to use trypsin in human cancer. As yet, however, we have no really conclusive evidence that trypsin has any decisive effect on human cancer. It is not claimed, even by Saleeby, that trypsin has been shown to prevent the return of cancer after operative removal. There is no record of the cure of human cancer by trypsin. In experimental cancer of mice trypsin is said to cause the tumor cells to die and to crumble away, but it is plain that many more successful experiments are necessary at

the hands of various investigators before it can be concluded definitely that trypsin cures cancer in mice.

We see that while the results obtained by Beard may warrant the continued study of the effects of trypsin on cancer, there is at present no basis whatsoever for the inference that a veritable cure for human cancer has been discovered. Under these circumstances it would have been more prudent, to say the least, on the part of Saleeby to have refrained from making statements in public print that are not readily differentiated from those "premature, outrageous, and, indeed, brutally cruel announcements which constantly infest the press," and which he himself condemns.

PUBLIC INSTRUCTION IN SEXUAL HYGIENE.

If the knowledge possessed by the medical profession as to the prevalence of the venereal disorders and their disastrous consequences, especially to the innocent wives and mothers of the country, and too often to their offspring, was possessed by the public generally, the evils named could not continue in their present prevalence and virulence. We warn the public freely against smallpox, we create almost a panic in regard to the "great white plague," but we actually cultivate ignorance in regard to a class of diseases which, while not always directly fatal, are directly and indirectly responsible for a vast proportion of the existing human misery. There is no doubt that with a patient and intelligent agitation of this subject by our profession, with the end of securing a more general knowledge on the part of the public of the facts, we could accomplish a vast amount of good and possibly eradicate the evils to a very great extent. A great change has taken place in the last few years, and the sign of the times is that the ban of secrecy is being removed and that light is to be shed on this subject so long shrouded in darkness. Sociologic workers are taking up the problem in earnest, and their co-operation will make effective the awakening for which the medical profession has long appealed. For example, *Charities and the Commons*, a periodical whose views on subjects more or less closely related to medicine we have often had occasion to quote with approval, publishes in its issue of February 24 communications from several prominent medical authorities on sexual hygiene and the necessity and propriety of the instruction of the public, especially the young. There need be no sacrifice of modesty or propriety if the effort is properly conducted. There are many ways in which the instruction can be given by parents to the inquiring child or by teachers and others to the still ignorant adolescent. We must remember that information is sought and secured on these subjects, and there is almost a certainty that what may be obtained from the usual sources is liable to be corrupting and dangerous both from a physical and a moral point of view. A recent writer¹ says: "Even the air of mystery that surrounds this subject when it is not frankly treated is a source of danger. For it stimulates the imagination, drives to clandestine sources of information, and tends to precocious stimulation of the sexual organism. The medical profession has much to do with the creation of a proper public opinion on this subject."

¹ March 7, 1906.

¹ Prof. George A. Coe, *Education in Religion and Morals*.

It is from physicians that the public has to obtain its facts as is recognized by the sociologic journal here referred to and it is only by the dissemination of correct information that we can combat one of the greatest social evils of all times

THE STATURE OF THE JAPANESE

The Japanese feel that their comparatively diminutive stature is a national humiliation, according to the reported statements of Surgeon-General Takaki of the Japanese navy. He attributes their smallness of stature to centuries of imperfect nutrition and believes that by proper dietetics they can soon attain the full stature of the European races. Already, by change of diet, a marked improvement has been made in the Japanese navy and he thinks that an equal effort will increase the stature of the general population. This is following Western ideals with a vengeance, notwithstanding their diminutive stature the Japanese in war have proved themselves to be fully the equals of at least one European nation, and it is perhaps a question whether their smallness might not have been an advantage to them under the conditions of modern warfare. As a correspondent of *Nature* points out, a very appreciable percentage of the Russian fire must have been ineffective as compared to that of the Japanese on account of the difference in size of the respective human targets. Still, if the Japanese wish to be large—and size has some advantages—no one can object. The main question is whether economic conditions in Japan will afford the essentials for such general dietetic alterations as are called for by the proposed experiment

Medical News

ILLINOIS

New Hospital—The Methodist Memorial Hospital, Mattoon, will be formally opened and dedicated March 17.

Smallpox—A case of smallpox was discovered in the Illinois State School for the Blind, Jacksonville, February 24.—The mayor of Colfax has ordered the postmaster to cease forwarding any mail from Colfax in order to check the spread of smallpox in that place.

Physician Gets Verdict—A jury in the Circuit Court of Logan County brought in a verdict for \$350 in favor of Dr. Hiram L. Cosby, Lincoln, against Sheriff James White of Logan County for professional services in saving the life of a man accidentally shot by the sheriff last year.

Old Offenders Brought to Time—Mrs. E. R. Liens of Decatur, an old time violator of the Illinois medical practice act, has been compelled by attorneys for the State Board of Health to make a settlement for her violations, including the payment of all costs of prosecution, and to enter into a written agreement to discontinue practice. Mrs. Liens conducted a bath and massage institution in Decatur and manufactured "Lien Diphtheria Cure." From time to time she undertook the nursing of diphtheria cases, using and applying her own remedy. Suit was brought against her at the instance of the State Board of Health in a justice court, but this suit was decided in favor of the defendant. The board promptly appealed and hearing was set for the January term of the Macon County Circuit Court. The case was settled only after a number of futile efforts of the defendant to secure continuance.—After several months of constant effort to bring justice on him, the State Board of Health has finally been successful in its suit against George B. McClellan, who was advertised extensively in Illinois as "Diamond Dick," the Indian healer. Recently authorizations for McClellan's prosecution had been issued in McHenry, McLean and Marshall counties

and in these counties suit was commenced, but the defendant in each instance escaped before service could be secured on him. About the middle of February he was found to be plying his trade in Adams County, in the vicinity of Quincy. He was caught and prosecuted at Golden, and a judgment for \$122.85 was secured against him. Being unable to pay the fine, the defendant gave a bill of sale for his eight trunks and other paraphernalia to avoid going to jail. "Diamond Dick" is an old offender. He was fined \$100 and costs in Peoria in 1901, and similarly in 1903 in Marengo, where he spent some time in jail. The energetic action of the State Board of Health has made practice impossible, and he now finds himself deprived of his goods and with cases pending against him in various counties, in which he will be promptly prosecuted if he appears.

Chicago

Smallpox—A case of smallpox was brought into Chicago from the West, February 27. The patient was a railway porter. No other cases have developed.

Laryngologists Meet—A successful meeting of the middle section of the American Laryngological, Rhinological and Otolological Society was held in the Northwestern University building, February 26.

More Funds for Hospital—J. Ogden Armour has given \$25,000 toward the \$140,000 required for the new George Smith addition, St. Luke's Hospital. Of the required amount \$80,000 is at present in the treasury.

Hospital Plans Abandoned—It is reported that the Iroquois Memorial Association has abandoned its plans for the establishment of a hospital to commemorate those who perished in the Iroquois Theater fire, on account of lack of interest in the project.

Needs New Building—The Chicago Eye, Ear, Nose and Throat College contemplates the erection of a new building to accommodate the increasing needs of the institution, to cost \$75,000. At the annual meeting the old board of directors was re-elected.

Deaths of the Month—February furnishes the lowest mortality rate recorded in the history of the city, 14.07 per 1,000. The total deaths number 2,217 and among the principal death causes were pneumonia, 413, consumption, 239, nephritis, 164, heart disease, 163, and violence, including suicide, 159.

Deaths of the Week—The total deaths from all causes for the week ended March 3 were 563, equivalent to an annual death rate per 1,000 of 14.32, a lower death rate than for the previous week or for the corresponding week of last year. Pneumonia led the death causes with 111, followed by consumption with 63, nephritis with 43, violence, including suicide, with 36, and heart diseases with 32.

Recommends International Vital Statistics System—In THE JOURNAL, January 27, page 283, in the item concerning the report on the Chicago department of health statistics by the committee of investigation, which was appointed for the purpose by the Chicago Medical Society, the impression is given that the committee's approval covered all the methods of the department. The committee did not favor the system of classification in use by the department and recommended the international system of classification instead.

IOWA

Inebriate Hospital Full—The new State Hospital for Inebriates, Knoxville, which was opened early in February, is now filled nearly to the limit, and many applicants are waiting for admission.

Magnetic Healer Convicted—D. F. Miller, a well-known healer of Waterloo, who was arrested for practicing surgery, medicine and obstetrics without state license, has been found guilty as charged.

New Hospitals—A German American Catholic hospital is to be erected in Waterloo this year, to cost about \$70,000.—The newly constructed cottage for men at the Clarinda State Hospital was opened early last month.

Made Insane by Drugs—Dr. Hiram L. Getz, Marshalltown, has been adjudged insane and committed to the Independence State Hospital. He has been suffering from diabetes for about a year and has become habituated to the use of drugs.

Will Not Admit Consumptives—The State Board of Health, at a recent session held in Des Moines, adopted an amendment to its rules by which no teacher or child afflicted with tuberculosis is to be permitted to teach or attend school in the state.

Damages Against Physician—In the case of Reynolds vs. Dr. Thomas U. McManus, Waterloo, in which \$10,000 damages

were claimed on account of alleged malpractice, a verdict of \$5,000 for the plaintiff was returned February 16 Dr Mc Manus' attorneys have asked for a new trial.

Personal.—Dr Even F Cowger, Riverton, has moved to Monte Ne, Ark.—Dr Amos J Thornber, Burlington, has been made president of the Des Moines County Medical Society, vice Dr Nathaniel McKittrick, resigned.—Dr Samuel W Moorhead has been made postmaster of Keokuk.

Southwestern Association Meeting.—At the annual meeting of the Southwestern Iowa Medical Association, held in Creston, February 16, about sixty were present, and the following officers were elected President, Dr William R. Whitnall, Hastings, vice president, Dr Lynch, Greenville, and secretary and treasurer, Dr Joseph P. Claybough, Creston.

Boy Healer a Practitioner.—In the case of the State of Iowa vs J G Gallagher, "the Minnesota boy healer," charged with illegal practice of medicine, the demurrer to the indictment was overruled by the court, who stated that "a person shall be held as practicing medicine who publicly professes to heal or cure diseases or ailments of the human body if such profession be made under such circumstances as to indicate that it is made with a view of undertaking to cure the afflicted."

KENTUCKY

Injured in Explosion.—Dr R E Gatz, professor of pharmacy at the Hospital and College of Medicine, Louisville, was seriously injured by the explosion of a test tube in the laboratory, February 24

Physician Wins Suit.—In the suit of Mrs Kate L McCullough vs Dr Elias S Frey, Louisville, for \$5,000 damages, alleged to have been due to an improper prescription, the jury returned a verdict for the defendant January 24

Midland Physicians Meet.—The Kentucky Midland Medical Society met at Midway January 15 and elected Dr William B McClure, Lexington, president, and Dr Charles W Kavanaugh, Lawrenceburg, vice president, and Dr J Harry Arnold, Versailles, secretary treasurer

Fires.—Fire in the Odd Fellows' Building, Smith's Mills, February 8, caused \$300 damages to the office of Dr Levin C Rovster.—On February 3 a disastrous fire occurred in Richmond which caused the loss of \$1,000 each to Drs Thompson J Taylor and J G Bosley

Colored Physicians in Trouble.—In the case of the City of Owensboro vs Dr Walker charged by Dr Jeremiah M Peters with assault in a quarrel over a vaccination, Dr Walker was fined \$25, and during the progress of the trial Dr Peters was charged \$3 for contempt of court.

New Hospital Staff.—The Good Samaritan Hospital, Lexington, announces the following hospital staff Consulting staff Drs David Barrow and Thomas H Kinnard, attending staff, Drs Frank H Clark, James C Carnick, Edward M Wiley, Julian T McClmonds, Waller O Bullock, John W Scott, Archibald H Barkley, Thomas Holloway, Charles W Morris, Joseph A Stucky, N Lewis Bosworth and Jefferson D Kiser

Tri-State Meeting.—At the meeting of the Central Tri State Medical Society of Ohio, West Virginia and Kentucky, held at Catlettsburg January 20, the following officers were elected President, Dr George Marshall, Portsmouth, Ohio, vice presidents, Drs John D Williams, Catlettsburg, Ky, and Albert S Brady Greenup Ky secretary, Dr Smithfield Kesser Ashland Ky, and treasurer, Dr Thomas W Moore, Huntington, W Va

Personal.—Dr Charles H Todd of Owensboro has been elected president of the Daviess County board of health.—Dr Clarence H Vaught Richmond, has been elected president of the Central Kentucky Medical Society.—Dr Robert Rivers Paducah, who suffered a severe burn of the right eye several weeks ago has entirely recovered.—Dr John V Havden Salem has been elected president, and Dr Frederick G La Rue, Smithland secretary of the Livingston County board of health.—Dr W Guy Eckman has been elected jail physician of Covington vice Dr James A Davis.—Dr J Halpin O'Reilly Louisville is seriously ill with pneumonia.—Dr Leslie Rudolph Woodville who has been critically ill is improving

MAINE

Gift to Hospital.—An anonymous friend of the Knox County General Hospital Rockland has made his annual donation to the institution to be used for the maintenance of the James A Creighton memorial free bed

Northern Maine Hospital Opened.—The Northern Maine General Hospital Eagle Lake Mills was opened for the reception

of patients January 15 The building contains forty rooms and three wards, and will have cost, when completed, about \$12,000

Clinical Society Meets.—The Waterville Clinical Society held its annual meeting February 22 and elected the following officers President, Dr Edward W Boyer, vice president, Dr H. E. Milliken, secretary and treasurer, Dr Frederick C Thayer, and business committee, the vice president, secretary and Dr B B Cragin

Personal.—Dr Herbert S Sleeper, Lewiston, has been elected a member of the local board of health.—Dr Bigelow T Sanborn has been elected a member of the Augusta City Hospital corporation.—Dr Milton C Wedgewood, Lewiston, is seriously ill.—Dr David S Hunnewell, Madison, who has been ill with bronchitis, is reported to be much improved

Academy Election.—At the annual meeting and banquet of the Maine Academy of Medicine and Science, held in Portland, Dr Clarence A Peaslee, Bath, was elected president, Dr Albion H. Little, Portland, corresponding secretary, Dr Frank Y Gilbert, Portland, statistical secretary, Dr Gilman Davis, Portland, assistant secretary, and Bertrand G March, Portland, treasurer

County Society Meeting.—The twelfth annual meeting of the York County Medical Society was held at Biddeford, January 11 The following officers were elected President, Dr William W Smith, Ogunquit, vice presidents, Drs M Hubbard Ferguson, Biddeford, and Roland S Gove, Sanford, secretary, Dr Clarence E Thompson, Saco, and treasurer, Dr Harry L. Prescott, Kennebunkport

Communicable Diseases.—Smallpox is still being reported in the eastern part of the state, the latest reports coming from Houlton, Cary and Lanues.—Typhoid fever has appeared in the lumber camp and mill of S P Dean & Son Company, west of Dudley The condition is rendered more serious by the fact that the camp is so far removed from medical aid.—A colored car cleaner for the Boston & Maine Railroad Co at Portland was taken sick at his work at the Union Station, February 24 He was examined by physicians and found to be suffering from smallpox He was removed to the detention hospital.—A case of smallpox was discovered in a lumber camp in the town of Ludlow this past week The authorities were notified and the camp was quarantined

MARYLAND

Patent Medicine Bill.—A new patent medicine bill, said to be satisfactory to the drug trade, has been introduced in the legislature

Vital Statistics Bill.—Favorable report has been made in the senate by the committee on sanitary conditions on a bill to enable the State Board of Health to collect vital statistics when local officers fail to collect them

Tuberculosis Sanatorium Bill.—A bill has been introduced into the senate creating the Maryland Tuberculosis Sanatorium and making appropriations for its erection and maintenance It requires the institution to be accessible by both railroad and water transportation, and places it under the control of a board of managers composed of the governor, the treasurer, the comptroller of the treasury, ex officio, and six other persons, who shall be appointed by the governor Of these six, two are to serve for two years, two for four years and two for six years from May 1, 1906 Thereafter the governor is to appoint two members of this board, to serve for six years, biennially They are to be chosen with a view to their intelligence, experience and character and without reference to ecclesiastical or party ties The bill appropriates \$100,000 for the establishment of the institution land and buildings and \$25,000 annually for its support It has the approval of the state tuberculosis commission and State Board of Health, and is backed by the medical profession

Baltimore

February Deaths.—During February 23 persons died from whooping cough (which is quite prevalent) 10 from influenza, 119 from consumption and 177 from pneumonia

Smallpox.—Seven cases of smallpox were reported during the week ended February 25, 8 patients all colored, were sent to the city quarantine station from Baltimore County on the same day, 19 cases in all were reported in the city during February

Addresses Delivered.—Dr Ira Remsen president of the Johns Hopkins University, addressed the Johns Hopkins Alumni in New York City March 2.—Dr Howard A Kelly spoke to 1,000 men at St John's Church Poroake Va, Febru

ary 25, on "Purity of Manhood"—Dr N H D Cox lectured March 4 on "Missions in Africa," where he spent three years as a missionary.

Hospital Report—According to the twenty eighth annual report of the Presbyterian Eye, Ear and Throat Charity Hospital, 11,803 patients were treated in 1905, 10,605 of these being white. There were 7,012 eye, 2,348 ear and 2,443 throat cases. There were performed 1,302 operations on the eye, 160 on the ear and 750 on the nose and throat. Since the opening of the hospital 227,048 cases have been treated.

MICHIGAN

New Hospital Soon Ready—The new Lutheran Hospital of Bay City will be ready to receive patients April 1.

Personal—Dr W Francis Fittell Kalamazoo has been confined to the house by illness.—Dr Andrew P Biddle, Detroit, is seriously ill with inflammatory rheumatism.

Patent Medicine Ordinance—An ordinance to prohibit the free distribution of samples of patent medicines, drugs, ointments, pills, powders and pellets on the streets or from house to house in the city of Grand Rapids, was passed by the common council, February 19.

Smallpox—Smallpox is still increasing in Gladstone, and several cases are reported among the employees of the Cleveland Cliff Iron Company, Kipling.—The disease has appeared in the vicinity of Calumet, and it is said that in the logging camps 200 men are at present under quarantine.

Banquet to Dr Harison—A dinner to welcome Dr Beverly D Harison secretary of the Michigan State Board of Registration in Medicine, formerly of Sault Ste Marie, to Detroit, was given by Dr Fleming Carrow, February 21, at which a number of the prominent physicians of Detroit were present.

Trichinosis—Dr J W Gustin, chairman of the Bay City board of health, has located the source of the trichinosis infection which has caused more than thirty cases of illness and one death in the city at a farm near Vassar where the hog from which the infected meat was cut was purchased.

New Dean of the Dental Department—Prof W D Miller of the University of Berlin has been offered and has accepted the position of dean of the Department of Dentistry of the University of Michigan, Ann Arbor. He will come to this country and begin his work in 1907. Dr Miller's researches on the bacteriology of the mouth and dental caries are well known. He is a graduate of the University of Michigan but has been the professor in the dental department of the University of Berlin for twenty-five years.

NEW YORK.

Water for Long Island Towns—The Citizens' Water Supply Company has made a contract to build a plant at Great Neck and supply that place and Thomaston with water. The entire plant will cost nearly \$100,000 and will have a capacity of 2,300,000 gallons a day.

Osteopaths Plead—Osteopaths in large numbers attended the joint hearing on February 28 before the senate judiciary and assembly public health committees to plead for the passage of a bill establishing a board of examiners for osteopathic physicians. The measure was opposed by physicians from all over the state.

A Field Hospital—A bill was signed by Governor Higgins on February 26 providing for the organization of a field hospital to be attached to the headquarters of the national guard to consist of one surgeon with the rank of major, three assistant surgeons, six field hospital sergeants, eight corporals, thirty privates, one musician and one cook.

Bills Proposed—A bill has recently been introduced into the legislature providing for a reservation on both sides of the Bronx River, from Kensico to Bronx Park. The reservation is considered necessary to prevent the pollution of the Bronx River by the towns to the north.—Another bill provides that "any person who by word of mouth or by written or printed circulars, messages, letters, documents, pamphlets, newspapers or magazine articles or publication of any kind, made, issued or circulated by him or by his authority, advocates or teaches the duty, necessity or propriety of putting to death by legal sanction or otherwise persons afflicted with an incurable disease because of their condition, is guilty of a felony."

Insanity Increasing—According to the annual report of the state commissioner in lunacy submitted to the legislature, insanity is on the increase in this state. In 1892 there was one insane person to every 337 people in the community.

Now the ratio is one to every 200. The commission considers this condition grave, but says that the new cases last year were fewer than the previous year. There are 27,406 insane in the public and private institutions of the state and 6,000 insane are maintained in their own homes. In the state institutions the net increase last year was 499, the lowest in ten years. It cost the state \$4,593,477 to care for the insane last year. Improvements to insane hospitals cost \$838,000 during the year. There were 5,316 new cases of insanity developed last year, of which the state institutions discharged 1,442 as recovered and 1,257 as improved. The state hospitals for this year asked \$2,000,000 for betterments, but the commission has cut this to \$1,500,000. The legislature is asked to appropriate \$4,950,000 for the care of the insane this year. The commission expects that with the money available for improvements and additions to the state hospitals the overcrowding in these institutions will cease before the end of the year. The commission presents the first report to the state board of alienists, which is especially charged with the duty of returning to their homes alien lunatics who find temporary domicile in the state. This work was hitherto undertaken by the commission of the state hospital superintendents. Owing to the activity of the new board the state was relieved during the past year of 417 insane patients of the alien class.

Report of New York State Health—The report of the New York State Department of Health for 1905 states that the most conspicuous feature of epidemic diseases has been the continued prevalence of cerebrospinal meningitis and the increase in its mortality. The disease was most prevalent in the maritime district and mostly in the borough of Manhattan. At the same time there was a moderate increase in the Hudson and Mohawk valley districts, and in the east central and the Lake Ontario and western districts. This, however, was anticipated, as it has been observed that a considerable local outbreak is often attended in subsequent seasons by much more widespread prevalence. Smallpox existed in a few places in the state during the year, but there were no deaths from it outside of New York City. The general mortality of the year was excessive, the spring mortality exceeding that of the summer, this was due chiefly to pneumonia and acute respiratory diseases, influenza being one of the chief of these. During the year rules were adopted requiring that certificates of still births be filed in the State Bureau of Vital Statistics. These certificates showed that there were about 10,000 stillbirths in the state during the year. The death rate in the larger of the state institutions was 5.56 per 100, against 6.85 during the previous year. The report states that the registration of births is far from satisfactory, and that the most incomplete registrations are in the cities of Albany and Troy. The registration of marriages, while more complete than that of births is not satisfactory and the report advises the enactment of a law requiring the contracting parties to procure a marriage license from the county clerk of the county in which the marriage is to be performed. It is also recommended that for statistical purposes as well as for the safe keeping of original certificates of births, marriages and deaths in the state, all such certificates outside the city of Greater New York should be filed with the State Department of Health. The work of the bureau of sanitary engineering in conserving the water supplies of the state is also noted. The report states that the department should be better equipped to protect the water supplies of the municipalities of the state, thus enabling it to prevent epidemics of typhoid fever due to impure water. General investigations of sewage systems and of sewage disposal were made. New work is outlined and needed changes and improvements are suggested.

New York City

Centennial Celebration—At a meeting of the Medical Society of the County of New York, held January 22, it was voted to celebrate the centennial of the incorporation of the society by a dinner at the Hotel Astor on the evening of April 4.

Illegal Practitioners Fined—In the Court of Special Sessions, January 11, Anthony Ofrias, a druggist of 382 Tenth Avenue, was fined \$250 for illegally prescribing for a fee.—John Justin, an osteopath, was fined \$100 for practicing without a license.

Hospital Dedicated—Archbishop Farley dedicated the new St Francis Hospital on March 1. It occupies the entire block bounded by One Hundred and Forty second and One Hundred and Forty third Streets, Brook and St Ann's Avenues, and contains 400 beds.

Harvey Society Lecture—The twelfth lecture in the Harvey Society course will be delivered by Prof Theobald Smith of the Harvard Medical School at the New York Academy of

Medicine, March 10, at 8 30 p m Subject "The Parasiticism of the Tubercle Bacillus and Its Bearing on Infection and Immunity"

Needs of Hospital.—The New York Society for the Relief of Ruptured and Crippled reports that in 1905, 983 patients, mostly children, were treated in the hospital, and that 44,157 treatments were given outside. The hospital is very much in need of funds and runs \$40,000 behind its permanent subscriptions every year.

Homes for Poor Convalescents.—Comptroller Metz urges the leasing by the city of the Manhattan Beach and the Oriental properties, including the hotels, for convalescent homes for the city's poor. The Austin Corbin estate, which owns the hotels is willing to lease these two properties to the city for \$150,000 a year, or to sell outright for \$3,150,000.

More Physicians for Bellevue.—As the result of recent action taken at a meeting of the board of trustees of Bellevue and the Allied Hospitals, Bellevue will hereafter have four paid physicians in its receiving ward. They will receive a salary of \$600 annually will serve four hour tours of duty, and will probably be chosen from the internes of the hospital.

Hospital Economies.—A preliminary meeting of representatives of more than a score of hospitals was held recently with a view to effect economies on hospital management. It was suggested that the city take charge of the ambulance service and establish a system of receiving stations throughout the city, where patients might first be taken and then sent to such hospitals as were able to receive them.

Contagious Diseases.—There were reported to the sanitary bureau for the week ending February 24, 1,636 cases of measles, with 34 deaths, 373 cases of tuberculosis, with 167 deaths, 341 cases of diphtheria, with 77 deaths, 214 cases of scarlet fever, with 8 deaths, 22 cases of typhoid fever, with 9 deaths, 15 cases of cerebrospinal meningitis, with 20 deaths, and 62 cases of varicella, a total of 2,763 cases and 315 deaths.

Hospital Statement Corrected.—At the annual meeting of the trustees of the Hebrew Infant Asylum it was announced that this institution had recorded but one death during the year and that this was probably the lowest mortality for any such institution in the country. It seems that the Colored Orphan Asylum had only one death last year out of an average of 327 children, more than twice the number sheltered by the former institution.

For Quieter City.—The representatives of various women's organizations were on hand at the City Hall on March 1 to endeavor to make an impression on the public health committee of the board of aldermen with reference to the suppression of street noises. Dr Darlington stated that the health department was frequently called on to suppress noises and that when a real nuisance was found it was peremptorily suppressed.

Personal.—Dr Jesse B Mickle, former superintendent of the Metropolitan Hospital on Blackwell's Island, has resigned on account of failing health.—The two upper floors of Dr Franklin Shields' home were destroyed by fire, causing damage amounting to \$5,000.—A fire occurred in Dr Robert Abbe's home on March 1 which did about \$100 damage.—The Rev John I Collins has resigned the presidency of Fordham University Medical College in order to take up educational work in Jamaica.

Diphtheria in Hospital.—Dr I O Woodruff, head of the medical division of Bellevue Hospital was attacked with diphtheria on March 1 and at once removed to Minton Hospital. It is alleged that the entire hospital and especially the children's wards had a narrow escape from a general infection. The hospital physicians contend that while they held that the cases which caused the disease to spread were diphtheria, the board of health declared them to be only exaggerated cases of tonsillitis.

For Seaside Hospital.—John D Rockefeller, Jr. has offered to give the Association for the Improvement of the Condition of the Poor \$125,000 toward the erection of a permanent seaside hospital for children suffering from tuberculosis of the bones and glands on condition that a like amount is raised before July 1, and that the permanent maintenance of the hospital is assured. An anonymous donor has promised to give \$25,000 of the fund that must be secured. Jacob H. Schiff, Mortimer L. Schiff and Percy R. Pyne have promised \$5,000 each and Felix M. Warburg \$2,000.

Subway Consumption.—Autopsies made at the Bellevue morgue show that some deaths have been due to fine particles of steel in the lungs. This statement was made public after

autopsies made on two subway track walkers within the past month. Dr Soper, in his report to the rapid transit commission, declared that in samples of subway dust examined by him there occurred more than 60 per cent of the minute steel particles, and it has been established that the steel dust generated by friction in the subway amounts to a ton a mile each month. Dr Soper finds the subway cleaner than the streets. General results show that there are twice as many bacteria in the air of the streets as there are in that of the subway. The subway could be made more healthful by substituting a smooth concrete surface for the broken stone ballast between the tracks that forms a nesting place for dirt and germs.

The Smoke Nuisance.—The recent widespread increase of the smoke nuisance has caused a renewal of the agitation for the stricter enforcement of the law governing the escape of smoke and noxious gases within the city limits. The Academy of Medicine has taken the matter up and the president, Dr Charles L. Dana, has appointed a committee consisting of Drs Joseph D. Bryant, Robert Abbe and Walter B. James to investigate the matter. Dr F. M. Crandall, president of the County Medical Society, has also taken up the investigation. On February 23 Dr Darlington read a paper on "Municipal Regulation of the Smoke Nuisance" before the Society of Chemical Industry, in which he depicted the difficulties of the department in obtaining the conviction of burners of soft coal. Charles T. Barney, who has made an extensive study of this question, says that under a certain section of the charter it is provided that in all judicial proceedings orders of the health department shall at all times be regarded and treated as *prima facie* just and legal and that whoever shall violate an order of the health department shall be guilty of a misdemeanor and be subject, in addition, to a penalty of \$250, to be recovered in a civil action. It was stated that until September, 1905, the department acted under these sections and obtained prompt compliance with its orders.

PENNSYLVANIA.

Upholding Dr Dixon.—At the meeting of the Clinton County Medical Society, January 18, resolutions were adopted approving the actions of Dr Samuel G. Dixon, the state commissioner of health, in enforcing the vaccination laws of Pennsylvania, and unanimously agreeing that the way to prevent smallpox is by vaccination, and that those who try to prevent and bring it into contempt only show their ignorance.

Pennsylvania Relief Report.—The monthly report of the Employees' Relief Fund for the Pennsylvania Railroad Company's lines east of Pittsburgh and Erie shows that the payments of benefits to its members and the families of deceased members for the month of January amounted to \$143,681.41, of which \$59,081.86 were on account of death, and \$84,599.55 on account of disablement by sickness and accident. The payments thus far are stated to have amounted in the aggregate to \$14,484,233.46 of which \$5,058,326.79 were on account of deaths and \$8,525,906.67 on account of disability.

Gifts for Hospitals.—W. L. Schaefer, Pottsville, has given to the Pottsville Hospital \$5,000 to endow a bed for sick and injured children in memory of his deceased wife.—The family of the late J. Preston Thomas, West Whiteland, have given \$6,000 to the Chester County Hospital to endow a room in that institution. By the will of Thomas Wiggins, Berwyn, \$500 was bequeathed to the institution.—Braddock General Hospital received more than \$4,000 as Christmas offerings.—By the will of the late Martin Bates Lancaster, \$10,000 is bequeathed to the Lancaster General Hospital.—By the will of the late James B. Oliver \$5,000 is devised to the South Side Hospital, Pittsburgh.—W. Ellis Corey has contributed \$10,000 toward a hospital for Braddock.—By the will of John Porterfield Allegheny, the following institutions are benefited: United Presbyterian Memorial Hospital, \$10,000; Presbyterian Hospital Allegheny, \$10,000; St. Joseph's Hospital Allegheny, \$10,000, and on the death of his sister \$100,000 is to be given to the Allegheny General Hospital.

Society Officers Elected.—At the regular meeting of the Clearfield County Medical Society, Clearfield, January 11, the following officers were elected for the year: President, Dr. Hiram O. King, Curwensville; vice president, Dr. John S. Kelso, Woodland; secretary and treasurer, Dr. C. R. McGirk, censor, Dr. Samuel J. Waterworth, Clearfield, and committee on public policy and legislation, Drs. Samuel C. Stewart, Clearfield, J. Frank Rowles and James L. Henderson, Osceola Mills.—At the regular quarterly meeting of the Franklin County Medical Society the following officers were elected: President, Dr.

Charles M. McLaughlin, Greencastle, vice president, Drs. John C. Greenawalt, Chambersburg, and William J. Sappington, Webster Mills (Fulton County), secretary, Dr. John J. Coffmann, Scotland, assistant secretary, Dr. H. Clay Deville, Chambersburg, treasurer, Dr. David Maclay, Chambersburg and censor, Dr. T. H. Wengly, Marion.—At the annual meeting of the Huntingdon County Medical Society, January 11, the following officers were elected: President, Dr. John C. Fleming, Shireysburg, vice president, Dr. Charles A. McClain, Mount Union, treasurer, Dr. George G. Harman, Huntingdon, secretary and reporter, Dr. Howard C. Frontz, Huntingdon, and censors, Drs. Rudolph Myers, Huntingdon, Charles Campbell, Petersburg, and Charles R. Bush, Orbisonia.—At the annual meeting of the Lancaster County Medical Society, the following officers were elected: President, Dr. Leroy K. Teshe, Bareville, vice presidents, Drs. John P. Roebuck, Lititz, and Samuel H. Heller, Lancaster, secretary, Dr. Park P. Breneman, Lancaster, treasurer, Dr. George H. Rohrer, Lancaster, reporter, Dr. Park P. Breneman, Lancaster, and censors, Drs. George W. Berntheizel, Columbia, Oliver Roland Lancaster, and James Mitchell, Lancaster.—At the annual meeting of the Lehigh County Medical Society, the following officers were elected: President, Dr. Augustus W. Hendricks, Allentown, vice presidents, Drs. Palmer J. Kress, Allentown, and Morris T. Cawley, Allentown, recording secretary, Dr. J. Treichler Butz, Allentown, corresponding secretary, Dr. Willard D. Kline, Allentown, treasurer, Dr. Albert J. Erdmann, Allentown, censors, Drs. H. Herbert Herbst, Allentown, Martin J. Backenstoe, Emmaus, and W. B. Erdmann, and reporter, Dr. William A. Hausman, Jr., Allentown.—At the fifty-seventh annual meeting of the Medical Society of Northampton County, held in Easton, January 19, the following officers were elected: President, Dr. Arthur D. Reigan, Easton, vice presidents, Drs. J. Frank Hahn, Bath, and Harry C. Pohl, Nazareth, secretary and reporter, Dr. J. J. Quiney, corresponding secretary, Dr. John E. Fretz, Easton, treasurer, Dr. Joseph S. Hunt, Easton, and censors, Drs. Charles McIntire, Easton, D. H. Keller, and William L. Estes, South Bethlehem.—At the annual meeting of the Perry County Medical Society, the following officers were elected: President, Dr. F. A. Gutshall, Blain, vice presidents, Drs. W. Homer Hoopes, Newport, and Edward E. Moore, New Bloomfield, secretary, Dr. A. Russell Johnston, New Bloomfield, treasurer, Dr. David B. Miliken, Landsburg, and reporter, Dr. Luther M. Shumaker, Elliptsburg.—At the annual meeting of the Warren County Medical Society, January 10, the following officers were elected: President, Dr. William M. Robertson, Warren, vice presidents, Drs. Otis S. Brown, Warren, and John C. Russell, Warren, treasurer, Dr. Morris S. Guth, Warren, secretary and reporter, Dr. Mary Conant, and censors, Drs. Michael V. Ball, Warren, Christian J. Frantz, Warren, and Charles W. Schmehl, Warren.

Philadelphia

Hospital Examinations—The examination for two resident physicians for the Easton Hospital will be held in Easton on Saturday, March 24.

Hospital Report—A remarkable year's record is shown by the report on the Maternity Hospital. There was but one death in the 72 cases treated during the year, and this was the first death in three years.

Dr. Allen Entertained—Dr. Richard H. Harte gave a dinner at his residence, March 3, in honor of Dr. Dudley P. Allen of Cleveland, Ohio, secretary of the American Surgical Association. Dr. Allen delivered an address before the Philadelphia Academy of Surgery at the College of Physicians, March 6.

Charitable Bequest—By the will of the late Louisa Dieterich the Rush Hospital for Consumptives will receive \$10,000 for the maintenance of two free beds, to be called the Daniel P. Dieterich free bed and the Louisa Dieterich free bed. A bequest of \$10,000 is also made for the use of the hospital. After other bequests the balance of the estate valued at \$54,000, is left in trust for the benefit of the hospital.

Society Officers Elected—At the annual meeting of the Northern Branch of the Philadelphia County Medical Society the following officers were elected: President, Dr. Howard D. Geisler, vice-president, Dr. Samuel H. Brown, recording secretary, Dr. R. E. Shrom, treasurer, Dr. John W. Millick, corresponding secretary, Dr. Thomas R. Currie, censor, Dr. Thomas Shriner, and librarian, Dr. Robert J. Hess.

Personal—Dr. George W. Pfromm has resigned as a member of the assistant medical staff of the Medico Chirurgical College Hospital.—Dr. Llewellys F. Barker, professor of medicine, Johns Hopkins University, addressed the James

Tyson Medical Society of the University of Pennsylvania on "Personal Observations of the Bubonic Plague in China and the Philippines," February 28.—Mr. G. C. Signor of Tioga County has been appointed superintendent of the Medico Chirurgical Hospital to take the place of J. E. Ellis. Mr. Signor assumed his duties of director of the institution March 1.

Wistar Institute Honored—The authorities of the University of Pennsylvania have been notified that the Wistar Institute of Anatomy has been chosen as the central institute for interacademic brain research in the United States. The Imperial Academy of Sciences at Vienna voted the Wistar Institute the best for brain research in this country at a recent meeting and this announcement has just been made. Recently Dr. Henry Donaldson of Chicago, Dr. T. P. Mall of Johns Hopkins Medical School, and Dr. Minot of the Harvard Medical School were elected members of the central commission for interacademic brain research. The work of the brain research at the institute will be under the direction of Dr. Donaldson.

Health Report—The total number of deaths reported for the week reached 670. This is an increase of 53 over the number reported last week and an increase of 117 over the number reported in the corresponding week of last year. The principal causes of death were typhoid fever, 43, measles, 16, whooping cough, 10, diphtheria, 9, consumption, 60, cancer, 28, apoplexy, 25, heart disease, 61, acute respiratory disease, 121, enteritis, 27, Bright's disease, 44, appendicitis, 7, suicide, 9, accidents, 33, and marasmus, 6. There were 469 cases of contagious disease reported, with 54 deaths, as compared with 483 cases and 58 deaths for the preceding week. Typhoid fever is still on the increase, 352 cases were reported with 43 deaths, as compared with 340 cases and 39 deaths in the week previous. There are under treatment at the present in the city about 2,500 persons suffering with typhoid infection.

Widener Memorial for Crippled Children Opened—The Widener Training School for Crippled Children, with its thirty-five acres of ground attached, was thrown open to the public for inspection, March 3. This is supposed to be the finest institution of its kind in the world. The home has been created by Peter A. B. Widener as a memorial to his wife, Josephine Widener. It is intended to be a surgical aid to train crippled boys and girls so that they may be able to care for themselves and earn a living. The buildings are of brick and stone, in the colonial style of architecture. The group of buildings is an irregular square of about 400 feet. The main building is 265 feet long, with a depth of 90 feet. In the building are the surgical wards, the kitchen and all the appendages of the culinary department. In one end of the basement is a gymnasium, with dressing rooms and bath rooms. On the second floor are the surgical wards, and on the third floor the operating rooms and laboratory, with rooms for etherization and for use of the surgeons. Lifts and inclined planes will render the transfer of patients from one floor to another easy and painless. The educational buildings will be fitted with machinery and apparatus so that mental and manual training will be carried on together.

Physicians and the Lay Press—At the meeting of the County Medical Society, February 28, resolutions were ordered to be referred to the directors for further action providing that the society declares that the appearance of articles in the daily press specifically describing the diseases of certain patients and the treatment thereof, together with names of attending physicians, etc., is a violation of Article 1, Section 7, Chapter 2, of the Principles of Ethics of the American Medical Association, that the onus of proof of non responsibility for such publication shall be on those whose names appear in such articles, that if the person so charged fails to convince the censors of non responsibility they shall cause to appear in two successive issues of the *Weekly Roster* a statement of the facts and a notice that unless the offender shall sign a written agreement to abstain from further similar offense all members of the society shall decline consultation with such offender, and that in case of a second offense the offender shall be liable to expulsion, that the assistant secretary shall keep a scrap book containing copies of all articles appearing in the daily press relating to regular physicians of Philadelphia, and that this book shall be kept on the secretary's desk for the inspection of members, and that the titles of all articles shall be read at each meeting, that the directors of the society be requested to prepare amendments of the by-laws to accord with these resolutions and that these resolutions shall appear in every issue of the *Weekly Roster* until and including that for the business meeting of the society in April.

VIRGINIA.

Dr Chiles Acquitted—Dr Luther R Chiles, Norfolk, indicted for having performed a criminal operation on Miss Atkinson, whose death followed, was acquitted February 19.

Oppose Tax—The physicians of the state are making another effort to obtain release from the state and local taxes imposed on practitioners of medicine. A committee of which Dr George Ben Johnston, Richmond is chairman, is preparing a bill to obtain release from this tax, which will be introduced at this session of the legislature.

Epileptic Hospital Bill Passes—The senate has passed a bill creating a state epileptic hospital on the site given for that purpose by the late S R. Murkland on the Amherst Palisades, opposite Lynchburg. The colony will be a branch of the Western State Hospital, Staunton, and the state will provide for its maintenance by increasing the appropriation for that institution.

Personal—Dr Walter A Plecker, Hampton, has been elected health officer of Elizabeth City County to succeed Dr John W Brown, resigned.—Physicians of Lynchburg presented Dr Abram I Clark of that city with a silver loving cup as a token of esteem, from the Academy of Medicine on January 20 the eighty ninth birthday anniversary of Dr Clark.—Dr Charles R Grandy, Norfolk, has been appointed a member of the State Board of Health, vice Dr Vernon G Culpepper, Portsmouth, deceased.—Dr Chertsey Hopkins, assistant physician at the Western State Hospital, Staunton, has resigned.—Dr William F Drewry, who some time ago was elected superintendent of the Western State Hospital, has decided not to accept the position, but to remain where he has been for a number of years superintendent of Central State Hospital.—Dr George S Walker, who has been assistant superintendent of the Western State Hospital for the past twenty years, has resigned.—Dr J S De Jarnette was elected superintendent to succeed the late Dr Benjamin Blockford.—Governor Swanson has appointed Dr Frank S Hope, Portsmouth, quarantine officer for the district of Elizabeth River to succeed Dr Julian Norfleet.

GENERAL

Change Date of Western Surgical—The Western Surgical and Gynecological Association will meet in Salt Lake City, Aug 31 and Sept 1, 1906. The change from the usual Christ mas time for the meeting is in accordance with a general vote just taken. Dr A T Mann, Pillsbury building, Minneapolis, is secretary treasurer.

Monument to Mikulicz—An international committee has been formed to solicit and receive contributions for a monument in honor of the late distinguished surgeon, Johannes von Mikulicz Radecki, of Breslau, Germany. Those who wish to express in this way their esteem and affection for Professor von Mikulicz, their appreciation of Germany's splendid achievements in surgery and their desire to strengthen the cordial relations existing between the men of science of the two countries may send contributions to any of the following: Drs W W Keen 1729 Chestnut Street, Philadelphia, W S Halsted 1201 Eutaw Place Baltimore, J B Murphy, 100 State Street Chicago, F Kammerer, 51 East Sixty sixth Street, New York.

International Medical Congress—The arrangements of the American national committee have now been fully made. Those who have planned to present papers at the congress should at once send short abstracts of their papers to the secretary general Dr Miguel Bombarda, Madrid, Spain. The official delegates from this country have been appointed by the secretary of state as follows: Drs L S McMurtry, Louisville, John H Musser Philadelphia, Frank Billings, Chicago, W W Keen Philadelphia, Nicholas Senn Chicago, F A Shattuck Boston, R Matas, New Orleans, Albert Vander Veer Albany, Walter Chase Boston, E DeWitt Connell, Portland Ore and Ramon Gutera, New York City. At the congress an orator will represent each country by delivering an oration before the assembled sections of the meeting. Dr Nicholas Senn will represent the United States and will deliver an oration on "The International Study of Carcinoma." Further information respecting the congress may be found in THE JOURNAL, Feb 17, 1906, page 521, and Jan 20 1906 page 207.

CANADA.

Health of Toronto—Toronto was a healthy city in February. The number of cases of diphtheria in February was 59 as against 26 in January and 111 in February 1905. There were 9 cases of scarlet fever and 15 of typhoid fever.

Compulsory Vaccination in Toronto—The board of education of the city of Toronto passed a resolution doing away with the compulsory vaccination of school children. Dr Ogden, one of the oldest members of the board, refrained from voting, favoring sending the question to the health officer for his opinion.

Society Elects Officers—The annual meeting of the council of the College of Physicians and Surgeons, New Brunswick, was held at Fredericton, February 9, when the following officers were elected for the ensuing year: President, Dr J P McInerney, treasurer, Dr Thomas Walker St John, registrar, Dr Stewart Skinner.

Ontario Health Report for January—During January the total number of deaths from all causes was 2,477. There were 141 cases of smallpox, with no deaths, and 168 cases of typhoid fever, with 51 deaths. Fort William, at the head of Lake Superior, had 106 of these cases, with 13 deaths. There were 165 deaths from consumption.

Ontario Nurses to Organize—The nurses of Ontario have before the legislature a bill by which they seek incorporation as the "Graduate Nurses' Association of Ontario." The government is to be vested in a council of fifteen, four of whom are medical men. Power also is asked to prescribe courses of study, to conduct examinations and to issue diplomas.

Personal—Dr J W Stirling, Montreal, has been appointed to the chair of ophthalmology at McGill University, to succeed the late Dr Frank Buller. Dr. Stirling was born at Halifax in 1859 and received his degree from the University of Edinburgh in 1884.—Dr A. B Macallum, professor of physiology in the University of Toronto, has been appointed a fellow of the Royal Society of England.—At the annual convocation at Queen's University, Kingston, on April 12, the degree of doctor of laws will be conferred on Dr C K. Clarke, superintendent of the Toronto Provincial Hospital for the Insane.

Hospital News—The Charles Alexander Memorial Fund in aid of the Montreal General Hospital now amounts to \$200,112. Fifty thousand dollars are needed to complete the memorial. Dr G H Mathewson has been appointed oculist to the hospital to succeed Dr J W Stirling.—The Alexandra Contagious Diseases Hospital, Montreal, is now rapidly nearing completion. The institution will be managed by a medical board, composed of three members, one from the General Hospital, one from the Royal Victoria Hospital and one from the Western Hospital. Dr J C Fysche, a graduate of McGill, will be superintendent, and he is now in training under Dr McCallum, of the Boston City Hospital.—Dr R. W Bruce Smith, inspector of public institutions in Ontario, recommends that an asylum be located in Ontario north of Lake Superior. He also recommends special treatment for chronic inebriates. During 1905 there were 11,000 convictions in Ontario, with a population of 2,000,000.—According to the thirty eighth annual report on the lunatic and idiot asylums of Ontario there were 6,213 patients certified insane on Sept 30 1905, an increase of 632 for the year, during which 1,130 patients were admitted.

FOREIGN

Unveiling of Bust of Liebault—A bust of A A Liebault, the founder of the "Nancy school," has been installed in the School of Psychology at Paris and was unveiled with much ceremony, February 1. Prominent psychologists were present from various countries and numerous telegrams were received from others unable to be present. Eighty persons partook of the banquet. Liebault was born in 1823 and died in 1904. His efforts to introduce scientific hypnotism into therapeutics dated from early in the sixties.

War on Consumption in the Home—The management of the Brompton Hospital for Consumption—London's great hospital for the treatment of this disease—is about to initiate an important departure in its treatment of tuberculosis. A joint subcommittee has been appointed, under the advice of the medical staff, to consider the feasibility of reaching the source of infection in the homes of the patients. Dr Newsholme, the medical officer of health for Brighton, will co-operate and it is hoped that every member of a consumptive's family may be brought under the direct care of the hospital staff.

Prizes for Designs for Village Baths—The German Public Bath Society has offered prizes of \$150 and \$100 for the best design for public baths for small towns and villages. The competition is designed to arouse interest in the subject of public baths in small places, bathing in rivers and ponds not being considered enough for the hygiene of the inhabitants all the year around. The jury to pass judgment on the designs consists of prominent physicians, architects and others. The designs must be sent in at once to the office of the society, Berlin NW 6, Karlstrasse 19, addressed to the Deutsche Gesellschaft f. Vollbäder.

Pure Food Regulations in Madrid—The *Siglo Medico* gives the details of decrees recently promulgated by the alcalde of Madrid which are in accordance with the most advanced ideas in regard to the necessity for arresting the adulteration of food and other anti-hygienic evils. One clause enforces the screening of food away from flies, another forbids the use of impure water in cooking and washing dishes. A fine of from 5 to 50 pesetas (\$2.50 to \$25) is to be imposed for infraction of the rules. Our exchange comments that the decrees would be worthy of the highest encomiums if only they were meant to be enforced. Experience has shown that they will never get beyond the pages of the official records on which they make such a fine showing.

Increase in Liverpool of Drunkenness Among Women—The statistics of the chief constable of Liverpool show that of 7,700 charges of drunkenness more than one third were against women. At the recent annual meeting of the Liverpool Society for the Prevention of Cruelty to Children it was stated that the society last year dealt with 10,288 children, and that the chief cause of the misery, cruelty and neglect was drunkenness, especially on the part of the mothers, and that while drunkenness among men is actually decreasing among women it is greatly on the increase. The Liverpool licensing bench has resolved that the police should be instructed to report houses where female drinking is excessive, so that the bench may deal with them under the compensation clause of the licensing act.

Silver Jubilee of Berlin Internal Medicine Society—On February 19 the Berlin *Verein für innere Medizin* celebrated the twenty-fifth anniversary of its foundation. It was organized in 1881 mainly by the efforts of Ernest von Leyden, and is now one of the largest associations of the kind in Germany. Its transactions contain many notable communications, and its success in conducting collective inquiries on various scientific themes attracted wide attention, especially its great collective inquiry on influenza. The festival address was delivered by A. Fraenkel on "Modes of Dissemination of Pulmonary Tuberculosis from the Clinical Standpoint." A number of honorary and corresponding members were elected among the former Quincke of Kiel, von Schrotter of Vienna, Maragliano of Genoa, Pel of Amsterdam and Kernig of St. Petersburg. The jubilee banquet was held a day or two later.

No Benefits from Compulsory Disinfection at Paris—The *Semaine Méd.* for February 14 cites statistics showing the number of cases of various communicable diseases in Paris during the last decade. Notwithstanding the regulations for compulsory disinfection, the number of cases of diphtheria and of scarlet fever was as large in 1904 as in 1895 (respectively 4,327 and 3,279 in 1895 and 4,053 and 3,592 in 1903). The number of cases of smallpox increased from 542 in 1895 to 822 in 1904 and of typhoid fever from 1,389 to 2,635. The editorial states that statistics from other cities show a similar lack of any decline in the number of cases of communicable diseases since the enforcement of compulsory disinfection. The number of cases keeps about on the same level or is higher than before these measures were introduced. The editorial regards this as an argument against extending compulsory disinfection to tuberculosis as some are advocating.

Annual Meeting of the Medical Society of Victoria, Australia—The annual meeting of this society was held in January. In his presidential address Dr. A. Jeffreys Wood, Melbourne, reviewed at length the history of the society from the time it was organized to the present. He referred to the two methods whereby the medical profession of Australia might be effectively organized. The first suggestion is that a new association be created on the lines of the American Medical Association and called the Australasian Medical Association, the other is that all the medical societies throughout the commonwealth should become branches of the British Medical Association. Dr. Wood said that the necessity for organization in the profession is daily becoming more apparent. "The days are past when a medical man can stand aside from medical politics and pursue the even tenor of his way without detriment to himself or to his colleagues." He concluded his address by urging the benefits to be derived from affiliation with the British Medical Association.

Prize for Professor Bier—The medical faculty of Heidelberg has awarded the Kussmaul prize to the professor of surgery at Bonn, August Bier, for his studies on artificially induced congestive hyperemia as a therapeutic measure. Bier is only 45 years old, but he has been preaching for years the advantages of measures to induce active or passive hyperemia in the treatment of various affections. His views were received with in-

difference at first, but have gradually gained more and more adherents until now they have become firmly established in current surgical and medical practice. Some go so far as to call this work the greatest achievement in surgery since the introduction of antiseptics. His latest application of the method of congestive hyperemia by interrupted circulation as a means of treating acute inflammations was regarded with amazement at first, but more and more testimony is constantly accumulating in its favor. All agree in the remarkable subsidence of the pain after the circulation has been interrupted by the tourniquet above the lesion. The Kussmaul prize was endowed not long ago by Czerny as a memorial to his father in law, Prof. Adolph Kussmaul. This is the first time it has been awarded. Bier's method of passive congestion is discussed editorially on page 726.

Organization of the Profession in Austria—The physicians in lower Austria who have charge of the free vaccinations have protested for years against the remuneration allowed them by the state for this and similar official medical work. The veterinary surgeons receive 20 cents for each animal vaccinated against hog cholera, but the rate for vaccinating a human being is only 20 hellers, about equal to 5 cents. The fees allowed for other medical duties are proportionately small, and the physicians are now banding together to demand juster remuneration from the authorities. They say that they are "paid less for a careful medical examination of a lousy tramp than the barber gets for cutting the vagrant's hair." The spirit of organization is spreading and the medical societies are standing by their colleagues in the opening strife. The physicians are opposing what they call "passive resistance" to the authorities, reporting every case in which there is a suspicion of infectious disease as "suspicious of scarlet fever," or "of diphtheria" or "smallpox." More than 10,000 cases had thus been reported as "suspicious" during the first week, overwhelming the district health officers whose duty it is to examine each suspicious case. Hitherto they have been notified only when the practitioner was measurably sure of a definite diagnosis.

Recent Decisions of the German Medical Court of Honor—The three latest decisions deal with questions affecting the organized action of the members of the profession in respect to contract practice. One physician was fined by the local court of honor because he had accepted a position with the local sickness insurance society at a 3 mark rate when all the medical officers of the society (*Krankenkasse*) had resigned in a body because the society had refused to increase their remuneration to a 3.5 mark rate. Appeal to the supreme court of honor resulted in the acquittal of the physician as it was held that his acceptance of a position with the society after the medical officers had all resigned did not bring him within the jurisdiction of the court of honor, especially as the rate accepted was not ignominiously low. In another case a physician accepted a position with the sickness insurance society when the members of the local medical chamber had voted that none of its members should accept such a position until the company agreed to certain conditions. The physician was condemned for this conduct by the court of honor, but as the local medical chamber was very loosely organized and as he had not been informed in regard to the result of its deliberations he was dismissed with merely censure. In another case eleven physicians voted in the minority in their local medical chamber (*Aerztekammer*) against certain conditions to be demanded of the insurance company ("free choice by the patient of his physician"). Being outvoted, they withdrew from the medical chamber and accepted the company's terms. The court of honor dismissed the suit against them.

LONDON LETTER

The Problem of Milk Supply

Dr. A. C. Houston has presented an important report on his bacteriologic examination of milk to the London County Council. It has been computed that in the United Kingdom in 1901 there were 4,102,000 milch cows and that the total yield of milk per annum was 1,722,840,000 gallons. It has been suggested that 20 per cent of the milch cows are tuberculous and that 2 per cent suffer from tuberculosis of the udder. Under existing conditions the opportunities of milk becoming contaminated both during and after milking are numerous. The cow may be coated with filth, the milk may be dirty, the milk utensils may be unclean and the air of the byre may be loaded with excrementally polluted dust. There are fresh opportunities for the ingress of filth during the transit of the milk and on the premises of the dairy shops and milk purveyors. Dr. Houston observes that bacteriologic testings can do little more than show whether such remedial measures as may from time to time be suggested or demanded have been taken. The actual

disease-producing power of milk can not be measured by the bacteriologist. He can hardly even say, unless bacteria are almost absent, that a particular sample of milk is devoid of power to cause disease. He can measure the amount of filth in milk, however, and determine its biologic qualities. Bacteriologic tests and standards are not, strictly speaking, preventive measures, but as they may be the means of forcing milk dealers to carry out suggested reforms they are indirectly remedial measures. Dr. Houston suggests the enforcement of the following conditions: Cows should be kept clean and housed in well ventilated, clean byres. The milker should be cleanly in his person and in his methods of procedure. The first milk should be rejected. All milk utensils should be kept scrupulously clean. The milk should be strained through a clean strainer. The conditions under which milk churns are conveyed from place to place and milk is carried to the consumers' premises should be greatly improved. Dairy and milk purveyors' shops should be kept clean. All persons engaged in handling milk should pay special regard to the importance of personal cleanliness. Far greater precautions than exist should be taken to exclude dust, flies, etc. The water used for washing dairy utensils should be potable water. On the question of personal cleanliness Dr. Houston says that no person who has contracted typhoid fever is fit to handle milk, even if long convalescent, in the absence of medical supervision. The danger of typhoid bacilluria must not be forgotten. Recently an epidemic of scarlet fever was traced to a man in the late stages of an attack of that disease who was employed to milk cows.

The Prevention of Consumption.

Sir William Broadbent has addressed an important memorial to the Metropolitan Asylums Board on the prevention of consumption. He points out that the International Congress on Tuberculosis held in Paris brought into prominence the importance of the prevention of consumption from a social point of view. He urges the board (which now controls all the fever hospitals of the metropolis), to constitute itself the tuberculosis authority. The first step would then be to ascertain the number and distribution of the cases of consumption in the metropolis, and the stage of the disease, with the circumstances and surroundings of the sufferer. This would be effected by a system of notification. The notification would be followed in the case of the poor by the visit first, it is hoped, of some member of a woman's association, such as in Manchester has been found to remove all objections on the part of the families, next, of a sanitary inspector, who would carry out the necessary disinfection. Thus advanced cases, from which the dissemination of the disease mostly takes place, would be identified and surrounded by protective and preventive measures. The destruction of the sputum would be secured, the importance of open bedroom windows would be inculcated and the removal of dust by damp cloths instead of dusting and sweeping would be taught. In a large proportion of the cases these measures would be sufficient to diminish the dangers of dissemination so that the patient might be treated at home. He would be surrounded with more comfort and would have a better chance of recovery. The periodical visits of women visitors and inspectors would insure the carrying out of the precautions. In advanced cases the patients should be removed to some home thus removing a source of disease and diminishing the privations of the family conducive to disease. No expenditures on buildings would be required if some of the hospitals provided for smallpox or other fevers now unoccupied are made available. In an important paper read before the Paris congress, Dr. Newsholme, health officer of Brighton, showed that the greater diminution in the death rate from consumption in this country as compared with Ireland and France, and with Germany before the establishment of numerous sanatoria in that country has been due not merely to improved social conditions but largely to the reception of advanced cases into the infirmaries and their removal as centers of infection.

Cremation in Great Britain

In the past year there has been no marked progress in the use of cremation as a means of disposing of the dead. The total number of cremations was 600 as against 566 in 1904 and 475 in 1903. In the erection of crematories, however, distinct progress has been made, in 1904 there were only nine, while in 1905 there were twelve. The total number of cremations performed in Great Britain since the first crematorium was established at Woking in 1885 is 5019. During 1905 crematories have been opened at Leeds and Bradford. A third is in process of construction at Sheffield. Thus though the progress of cremation is slow in regard to numbers the area of operation is gradually extending.

Pharmacology

A Phosphorized Cerebro-Spinant

FALL RIVER, MASS., Feb 22, 1906

To the Editor —Among the proprietary medicines offered to physicians is one called Frehlig's Tonic and bearing the striking sub title of "A Phosphorized Cerebro-Spinant," the formula of which is Cinchona, nux, ignatia, matricaria, free phosphorus, C P. No quantities whatever are given, but its indications are "paralysis, vertigo, epilepsy, Bright's disease (early stages), neurasthenia, debility, debilitating losses, mental failure, spinal weakness, nervous dyspepsia, all troubles affecting the brain, nerve centers and spinal cord, and as a safe and powerful aphrodisiac."

The literature which accompanies it is very striking, and if the firm who get it up are no more familiar with the action of drugs than they are with the meaning of the words which they use to describe its action, I think the profession at large had better make their own combinations of these remedies rather than trust to one which is offered to them at the price of \$1 per ounce. After describing how the remedy is combined in such a way that a dose of from 5 to 10 drops in half a glass of water is all that is needed to produce the desired effect and secure beneficial results at once, the descriptive circular says

"Those familiar with the action of drugs know the homogeneous relations they bear to each other, how their pathogenetic and curative spheres are enlarged and dynamitized by a judicious combination, extending their spheres of usefulness, and governing numerous indications. For such, but a short acquaintance with the Tonic is necessary to convince them that its remedial power and scope far exceed those of any or all the remedies it contains, when used singly."

"A very causal reference to the pathogenetic and curative action of the Tonic will show how completely all of these symptoms and diseases come within the preventive and its curative sphere, together with that voluminous class connected with indigestion and a want of proper assimilation."

It strikes me that the words "pathogenetic" and "curative" hardly go together in the same sentence, descriptive of the same remedy, unless one is considering both the poisonous and the therapeutic action of a drug, and then the dose would necessarily be different. I personally have no use for any tonic which is pathogenetic, and I hope no member of the profession has.

Further on in the same circular, under the heading of "Dyspepsia," it states that "the formula of the tonic shows how the pathogenetic and curative action of its several constituents meets the exigencies of any phase of indigestion." I take it that the pathogenetic action of the tonic is so great that the disease which it produces causes its owner so much trouble that he forgets entirely the dyspepsia, and so in this way the dyspepsia is cured. It seems to be possible with this remedy to cure all cases of indigestion, functional disorders of the brain, threatened softening, progressive locomotor ataxia and general paralysis, but it is still more brilliant in those cases developed by the advancement of age. For these conditions it comes nearer being the fountain of youth for which Ponce de Leon sought two or three centuries ago than anything which has yet been brought to the attention of the human mind.

The circular closes with the statement

"The wide range of the curative sphere of this article is truly remarkable. For while it is not a catholicon, nor is it pretended to be, it covers more symptoms and is curative to more diseases of an alarming character than any other one remedy or combination of remedies, within the limits of our materia medica, or books of medicinal formulae."

It is stated at the beginning of the circular that this is sent solely to the profession, so it must be assumed that the profession is using this remarkable medicine. With two or three such medicines in his grip, a physician should be entirely independent of the Pharmacopeia, the National Formulary and all the old standards.

GEORGE L. RICHARDS

A Letter, a Reply, and Comments

[THE LETTER]

JOSEPH McDONALD, JR., M.D.

EAST ORANGE, N. J. Feb 16, 1906

Dr. J. A. Pettit, Portland, Ore.

Dear Dr. Pettit—I have read your article in the last issue [Feb 17] of *THE JOURNAL A M A* on "The Lais of Proprietary Medicine," and I can not refrain from expressing to you my sentiments.

This tirade against nostrums and proprietaries is, in my estimation, insulting to the medical profession. The doctors of America are a body, an intelligent class and quite able to decide which is and which is not a suitable remedy to be administered to their patients. It must be left to the individual opinion of the physician prescribing whether the product is or is not a nostrum for this reason that what might appeal to one as a legitimate proprietary article, to another would seem a rank nostrum.

Now eliminating every proprietary or so called proprietary remedy from our list of useful remedies, would mean that we must give up those remedies manufactured by legitimate houses these same products conforming to the prescribed rules in the Pharmacopeia, the same should be compounded by the druggists. You must not forget, doctor, that the large manufacturing chemists make it an aim to purchase the best crude drugs that the market produces, while the druggist is supplied by his wholesaler to whom he is many times subsidized. As a consequence cheap and inert drugs are furnished and compounded. Inasmuch as you have committed yourself on the proprietary question, I would suggest that you take a broader view of the situation. From your article I should say that you read only *THE JOURNAL* of the A M A, as you refer in your comments to the advertisement of Kutnow's powder and their method of introducing their goods in Europe as well as to relash attacks made on other manufacturers.

If you had been well posted on this situation you would have known (I refer now to Kutnow) that other manufacturing chemists are doing identically the same thing, and these chemists are considered ethical from the standpoint of *THE JOURNAL* of the A M A.

I would call your especial attention in this respect to Angier's Petroleum Emulsion, which advertises most extensively to the public in Europe and I believe carried an advertisement in the same publication from which the advertisement of Kutnow's Powder was reproduced.

I take the liberty of enclosing herewith a few pages of a little magazine [1] that occasionally comes to my office, showing that Angier's Emulsion, which carries an advertisement in *THE JOURNAL A M A*, and is considered ethical, nevertheless advertises to the laity in Europe.

My letter to you, doctor, is not in defense of Kutnow's Powder or any other article or product. It is merely a suggestion that you view the situation from a non biased standpoint and also consider that the profession of America as a body are intelligent men, and you are more liable than otherwise to offend the doctor by preaching to him of his presumed incompetency than you are to convert him to your way of thinking.

J. McDONALD, JR.

[THE REPLY]

PORTLAND, ORE., Feb 28, 1906

Dr. Joseph McDonald, Jr., East Orange, N. J.

Dear Sir—I am in receipt of your letter of the 16th inst in criticism of my article in *THE JOURNAL A M A* of February 10, terming it a tirade, etc., against nostrums and proprietary preparations (which you seem to uphold as benefactors of a medical profession) and an insult to the medical profession.

In reply, I would beg to directly contradict your nomenclature. That which you term a "tirade" is simply a plain statement of plain facts, and that which you term an insult to the medical profession is regarded by all the medical profession who have talked with me or written me, in the words of the countryman, "them's my sentiments." To understand the motives which actuate your adverse criticism, I would have first to know that of which I am now ignorant, viz,

your possible professional and commercial alliances and interests [2]. If you have any heart or money interests in products sold to our profession, a discussion of the merits of this matter would be futile, because by reason of those circumstances you would not be open to conviction. I certainly should not try to convert to a gold standard an advocate of silver currency who is possibly interested in silver mines.

I have read the magazine from which you enclose clippings. If there is a biased and one sided magazine in this country, you can find it under that title. You accuse me of confining my reading to *THE JOURNAL A M A*, and I believe I may justly accuse you of confining your reading matter to the small sheets of this narrow-minded paper you enclose to me, and I think that all will agree that my choice of reading matter is a far better selection than yours. The journals which come to my desk are carefully selected for their scientific character and not for their commercial prominence.

You conclude by saying you are not defending Kutnow's Powder or any other article, but the general construction of your letter influences me to state in reply that I can not help feeling you are defending "something." I will not try to convert you, doctor, because I am afraid I can't.

J. A. PETTIT

[THE COMMENTS]

[1] The "little magazine" referred to is the *American Medical Journalist*, November, 1905, issue. This publication is owned or managed by Mr. D. A. O'Gorman. Mr. D. A. O'Gorman owns or manages the O'Gorman Agency. The O'Gorman Agency handles the advertising accounts of the Lawrence (Medical Brief) interests. At least a good part of the following preparations are numbered among them: Echthol, Bromidia, Neurilla, Sanmetto, Cactina, Seng, Chionia, Peacock's Bromides, Celerina, Iodia, Papine, Pil Hemorrhoidica, etc. The "little magazine" seems to be the official organ of those interests that are not in accord with the present movement against nostrums by the American Medical Association. The advertisement of Angier's Emulsion was refused further space in *THE JOURNAL* for reasons that it is not necessary to give in this connection, and ceased to appear after Nov. 4, 1905, issue. It is interesting to note that while the *American Medical Journalist* for November, 1905, directed attention to the fact that this preparation was being advertised to the laity abroad, this particular issue was not published until February, 1906—three months after the advertisement ceased to appear in the advertising pages of *THE JOURNAL*—ED.]

[2] Joseph Macdonald, Jr., M.D., graduated from the Baltimore University School of Medicine in 1904. To the best of our knowledge he has never practiced medicine. Previous to April, 1905, he was manager of the *International Journal of Surgery*. Since that date he has purchased the *American Journal of Surgery* (formerly the *American Journal of Surgery and Gynecology*, owned and edited by Dr. Emory Lanphear), of which he is at present the managing editor and owner or part owner. A casual glance through the advertising pages of the *American Journal of Surgery* will readily indicate where Dr. Macdonald's vested interests lie—ED.]

Formula of Ayer's Cherry Pectoral

LOWELL, MASS., Feb 19, 1906

To the Editor—On page 446 of *THE JOURNAL*, February 10, is a note from Dr. Frank L. Smith, of Stafford Springs, Conn., which is likely to call discredit on this house, and yet which we are confident Dr. Smith would never have written had he been acquainted with the facts in the case.

For about sixty years Ayer's Cherry Pectoral was made according to the original formula of Dr. J. C. Ayer, which is here correctly given by Dr. Smith. But about one year ago we decided to publish the formulæ of our medicines, hence we took advantage of this fact to change these formulæ. The formula we adopted for Ayer's Cherry Pectoral was that recently given in *THE JOURNAL*. The old preparation was called Ayer's Cherry Pectoral. The new preparation is known as Ayer's Cherry Pectoral (Revised Formula). The formula of the old preparation was never printed on the label. Every bottle of Ayer's

Cherry Pectoral that has left this establishment for nearly a year has had the new formula printed as a part of the label

Therefore it is true that there are two kinds of Ayer's Cherry Pectoral on the market the old kind formula, of which Dr Smith gives on page 446, and the new kind, containing the terpin hydrate and heroin, as recently given in THE JOURNAL. We presume it will be many years before all of the old Cherry Pectoral will be entirely off the market

CHARLES H. STOWELL, M.D.,
Treasurer and General Manager, J C Ayer Company

Proposed Canadian Legislation on Patent Medicines Indorsed

The Vancouver Medical Association met February 13 and indorsed the bill now before the legislature of British Columbia for the regulation of the sale of patent medicines. The society will also ask the medical council to notify the physicians of the province regarding proprietary medicines said to be equally fraudulent. The department on island revenue at Ottawa has issued a bulletin regarding the analysis of certain patent medicines at present on the Canadian market

Medical Legislation

The Opportunity for the Pure Food Bill.

The Pure Food Bill is now in the House of Representatives, having passed the Senate. It, therefore, stands a good chance of becoming a law, provided sufficient interest is taken by the public and by the profession to offset that brought to bear by the organizations that are opposing the measure, for all that these organizations can now do is simply to influence congressmen through public opinion. Their arguments are worn threadbare, money will not count. Consequently, their only method will be to influence congressmen through individuals, such as the druggists, who are appealed to by the "patent medicine" men in the following letter. There is a clause in the bill, as passed by the Senate, to regulate "patent medicines," but it practically amounts to a joke. We understand, however, that the joke has been taken in dead earnest by the committee to which the bill was referred in the house, and will be modified so as to be effective for some good in preventing fraud in proprietary medicines. This is what is referred to in the following letter, written by the chairman of the committee on legislation of the Proprietary Association of America and cautiously sent where it is expected to do good. This letter shows that the "patent medicine" men realize what is going on and are acting accordingly. We do hope that every reader of THE JOURNAL will do his best and take the hint from the Proprietary Association and write to his congressman to support the Hepburn bill. While there is no particular hurry about doing this now, it is well to bear the matter in mind and act as soon as the committee reports the measure.

THE PROPRIETARY ASSOCIATION OF AMERICA COMMITTEE ON LEGISLATION

CHICAGO, March 1, 1906

Gentlemen —The situation at Washington has taken a decided turn and Mr Douglass, who is there, wires that the situation is serious and that there is a possibility that a provision for the publication of the formula on proprietary medicines for interstate commerce will be added to the Pure Food Bill by the House committee.

Mr Douglass wires also that the Ladies' Home Journal Bill may be introduced in the House, for the District of Columbia and that it is indorsed by the district officials on recommendation of the health officer.

Every influence you can bring to bear on your congressman should be brought at once. There should be no let up to your endeavor until the Pure Food and the District of Columbia bills are disposed of satisfactorily. You will readily realize the importance of prompt action.

Take these matters up with your congressman by wire and have every druggist possible wire his congressman to oppose the passage of formula legislation, either for the District of Columbia or as an amendment to the Pure Food Bill.

We will endeavor to keep you posted regarding developments and suggest that you keep in touch, from your end, with this office. It is important that telegrams be sent to members of congress by druggists and others interested. Yours very truly,

JOHN W KENNEDY, Chairman

Address—Room 1107, No 184 La Salle Street

The Vote on the Pure Food and Drug Bill.

The American Medical Association has been active in its support of the Heyburn pure food and drug bill which passed the United States Senate February 21. The agitation in behalf of this measure has had no more influential support than that which was derived from the petitions sent from practically every county in the United States, signed very generally by the medical profession of each county, urgently requesting senators and members of the House of Representatives to support the measure.

Now that it has passed the senate by a splendid vote of 63 to 4, it devolves on every medical man in the United States—particularly on every one who has signed a petition or sent a letter to Congress in this behalf—to write each senator who voted for the measure and thank him for his attitude on this question.

It is only by expressed appreciation of favors asked for that other favors may be secured in the future. The vote was as follows:

YEAS—63

Alger	Depew	Heyburn	Overman
Allee	Dick	Kittredge	Patterson
Ankeny	Dillingham	Knox	Penrose
Beveridge	Dolliver	La Follette	Perkins
Blackburn	Dryden	Lodge	Piles
Brandegee	Dubois	Long	Platt
Bulkeley	Flint	McCreary	Rayner
Burkett	Foraker	McCumber	Scott
Burnham	Frre	McEnery	Simmons
Burrows	Fulton	McLaurin	Smoot
Carter	Gallinger	Martin	Stone
Clapp	Gamble	Millard	Sutherland
Clark (Mont.)	Gearin	Mooney	Tallaferro
Clark (Wyo)	Hale	Nelson	Warren
Clay	Hansbrough	Newlands	Westmore
Daniel	Hemlaway	Nixon	

NAYS—4

Bacon	Bailey	Foster	Tillman
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NOT VOTING—22.

Aldrich	Crane	Hopkins	Proctor
Allison	Culberson	Kean	Snooner
Berry	Cullom	Lattimer	Teller
Burton	Elkins	Mallory	Warner
Carmack	Frazier	Morgan	
Clark (Ark)	Gorman	Pettus	

Help the Pure Food Bill to Pass

ASHLAND, NEB, March 5, 1906

To the Editor —In my capacity as chairman of the committee on pure foods and pure drugs of the National Legislative Council of the American Medical Association I appeal to the members of this council, resident in the different states of the country, to lose no time in urging on the county medical societies with whom their members of the house of representatives live, to send at once to each one of them resolutions, both strong and unequivocal, demanding respectful attention to the wishes of their constituents for the passage of the Heyburn bill, with the amendments of the senate non concurred in, or for the passage of the Hepburn bill which is identical with the Heyburn bill in spirit before the amendments were attached to it by the senate. Urge on the representatives that this measure has become a crying need and that the people intensely feel it, especially when they ask so little in the bills, namely "Label correctly what you put up and leave to us, the people, the choice of buying your products."

I trust the members of my committee, as well as the members of the council from the different states, will pardon me and THE JOURNAL if any or all of the county societies should act at once on this appeal, even if they do not first receive their invitation to do so. Time is short and every word of warning not to go to sleep, urged by THE JOURNAL is only too appropriate, in the face of the activities displayed by those who for the sake of gain, care very little whom they injure or what they destroy. Nebraska has already commenced to apprise its congressmen of its wishes. These men are wide awake and know

that their people are in dead earnest in this matter, in fact, they themselves feel the need of this legislation for their own families, they will need little urging, and I sincerely believe this will prove true of an overwhelming majority of the members of the house of representatives A S V MANSFIELD

New Jersey Ready to Work

Dr L M Halsey, Williamstown, N J, member of the National Legislative Council for New Jersey, has completed the organization of the National Auxiliary Legislative Committee for that state Dr Halsey called for a meeting of the Committee on Legislation of the State of New Jersey at Trenton, March 6, to take action on the anti nostrum bill now pending in their state legislature, based on the act published in the February number of the *Ladies' Home Journal*

Association News

Headquarters for Section on Practice of Medicine

We are asked to announce that the Hotel Somerset has been selected as the headquarters for the Section on Practice of Medicine for the Boston session It is suggested that there will be a better chance for acquaintanceship if as many members of the section as find it convenient to do so will register at that hotel

NEW MEMBERS

List of new members of the American Medical Association for the month of February, 1906

ALABAMA

Alexander, J F, Blocton
Black, O D, Wilsonville.
Brown, J T, Riverside
Baldridge, I L, Huntsville
Burns, R A, Alabama City
Burdshaw, L R, Headland
Bogges, J W, Woodville
Brown, J M, Gadsden
Blue, J H, Montgomery
Crutcher, J S, Athens
Deweese, T P, Gamblemines
Duff, W S, Ft Payne
Duckett, L F, Florence
Faucett, G L, Gadsden
Hagood, M H, Mt Willing
Hall, B M, Huntsville
Harris, D A, Coal City
Henry, T H, Tusculumbia
Hagan, W J, Athens
Lee, L F, Consul
Laney, M W, Eden
Moore, J C, Anniston
Maples, W C, Scottsboro
Northen, C S, Talladega
Palmer, C R, Tusculumbia
Robinson, T F, Bessemer
Semmes, R O, Camden
Simms, B B, Talladega
Stringer, W L, Falkville
Woodson, J L, Coal Valley
Warwick, B B, Talladega
Williamson, E O, Gurley
White, W Y, Anniston

ARIZONA

Levengood, H W, Helvetia

ARKANSAS

Blackwell, O G, Pine Bluff
Blackburn, E W, Ozark
Blakemore, J E, Van Buren
Campbell, J M, Russellville
Ellsworth, E H, Hot Springs
Foster, J H, Ft Smith
Houston, A L, Clarendon
Harris, A E, Little Rock
Jones, Erner, Somerville
John, J W, Pine Bluff
Judd, O K, Little Rock
Lucas, Giles, Van Buren
Presley, W L, Morrilton
Thorne, E C, Little Rock
Vaughan, M, Little Rock

CALIFORNIA

Barton, H P, Los Angeles
Botsford, Mary E, San Francisco
Bucknall, G J, San Francisco
Bromley, R I, Sonora
Brown, T F, Los Angeles
Claypole, E J, Pasadena
Chipman, E D, San Francisco
Covey, E J, Fresno
Chadbourne, E R, Pasadena
Dozier, Barton, Los Angeles
Draper, A L, San Francisco
Evans, I H, Highland

Fills, T D, Elsinore
Lash, H B, Los Angeles
Fay, F G, Sacramento
Graham, J W, Lompoc
Hyman, Solomon, San Francisco
Hay, D O, Los Angeles
Jennings, G D, Covina
Moser, G G, Redlands
Moss, J M, San Francisco
Makinson, H A, Oakland
Poore, J L, Sacramento
Pritchard, I H, Colton
Pitcher, Josephine, Halfmoon Bay
Peoples, S Z, Petaluma
Read, W P, San Francisco
Silverburg, Melville, San Francisco
Taylor, A W, Santa Barbara
Van Slyck, D B, Pasadena
Wagner, John, San Francisco
Wrenn, J Q, Placerville

COLORADO

Boottav, F S, Akron
Gillaspie, Carbon, Nederland
Jackson, F A, Salida
Loomis, P A, Colorado Springs
Porter, V W, Lafayette
Russell, J A, Boulder

CONNECTICUT

Lemmar, G F, Danbury
Wheatley, L F, Meriden
Winne, W N, New Haven

DELAWARE

Marshall, Wm, Jr, Wilmington
Wertenbaker, Wm, New Castle

DISTRICT OF COLUMBIA

Dunnigan, J P, Washington
Greene, S H, Jr, Washington
Harding, G T, Jr, Washington
LeMerle, E L, Washington

GEORGIA

Cole, J E, Middleton
Strickland, J O, Pembroke
Traylor, G A, Augusta

IDAHO

Campbell, B F, Rexburg
Mitchell, F W, Blackfoot.
Story, R T, Albion

ILLINOIS

Bryant, J H, Galesburg
Brill, J A, Chicago
Buchanan, W A, Paris
Bradley, R H, Marshall
Becker, H F, Danville
Coggeshall, T C, Henry
Cruse, C V, Iola
Culbertson, S D, Piper City
Dowdall, W T, Jr, Peoria
Dwight, F A, Chicago
Eddy, I H, Chicago
Epperson, J C, Kansas

Friedman, J C, Chicago
Granay, T L, Irvington
Gaffner, Theophilus, Trenton
Hesslin, H N, Kewanee
Holleman, P W, Chicago
Hummel, R O, Joliet
Hayman, L B, Chicago
Kaiser, J M, Somonauk
Kimball, Z V, Hillsboro
Lehman, S W, Dixon
Lang, H W, Chicago
Law, D F, Weston
Lyons, Jennie, Champaign
Lowery, J D, Homer
Lamborn, W H, Chicago
Mall, H B, Kewanee
McCaughy, R S, Hoopston
McGonagle, T C, Chicago
Ochaner, E H, Chicago
Pietrzykowski, A, Chicago
Pearce, Edward, Marshall
Powell, G P, Dixon
Renn, T H, Chicago
Roane, J Q, Boulder
Spangenberg, W C, Chicago
Ulrich, J H, Peoria
White, J V, Auburn
Woltman, H C, Jacksonville
Waterous, H W, Galva
Werth, S S, Oak Park

INDIANA

Burlington, J R, Attica
Blery, T E, Scottsburg
Costello, H F, Decatur
Clark, J H, Princeton
Campbell, W S, Lafayette
Dubois, J M, Indianapolis
Lillott, J M, Linden
Hammond, G B, English
Howard, N P, Greenfield
Kendle, G C, Princeton
Lawson, J E, Corydon
Leavitt, R H, Terre Haute
Langdon, H K, Indianapolis
Lowder, H R, Bloomfield
Modricker, J M, Wabash
McLeay, J D, Indianapolis
Swartzel, I A, Indianapolis
Stone, Chas E, Windom
Stemm, W H, North Vernon
Thompson, W H, Winamac
Van Pelt, R T, South Bend
William, G T, Crawfordsville

IOWA

Bradford, D S, Janesville
Balliett, M R, Waterloo
Brown, C T, Waverly.
Beaver, C V, Anita
Branson, W S, Irwin
Bowen, A S, Valeria
Chenoweth, C B, Newhall
Childress, M, Osaloosa
Casady, S A, Cantrill
Carton, A R, Britt
Conaway, A B, Marshalltown
Corrigan, W H, Rockwell
Davenport, F D, Winterset.
Dietz, C F, Carson
Fordyce, W, Fairfield
Groom, W S, Britt
Hanske, E A, Bellevue
Jarvis, F J, Delta
Jay, E W, Marshalltown
Jones, L H, Wall Lake
Kaadt, P S, Clinton
Lee, W A, Bellevue
Murphy, F G, Mason City
McCarthy, J F, Dubuque
Nichols, H H, Marshalltown
Neshitt, G M, Waterloo
Pinkerton, J A, Traer
Hidenour, J E, Waterloo
Schooley, A H, Terril
Sleepers, L E, Ottumwa
Scholten, D J, Alton
Thompson, W L, Bayard
Wagner, G A, Van Horne
Wolfe, C E, Coon Rapids
Wuesthoff, S W, Lake Park
Young, R M, Red Oak

KANSAS

Aitken, W A, Valley Falls
Anderson, E E, Garland
Bredehoff, J C, Ford
Conaway, C L, Cottonwood Falls
Dougherty, J L, Hattville
England, G W, Valley Falls
Fullenwider, C M, El Dorado
Hassig, J F, Kansas City
Haurv, S S, Newton
Haggard, D D, Phillipsburg
Howe, P L, Great Bend
Moore, G W, Gas
Palmer, E M, Wichita
Pile, Eugene, Portland
Scholle, F H, Topeka
Roff, O W, Newton
Tooler, G E, Washington
Vestling, V I, Marquette
Wagar, L S, Florence

KENTUCKY

Anderson, W W, Newport
Anderson, J R, Owensboro
Almon, E T, Madisonville.
Bennett, La Fayette, Central City
Brothers, C H, Paducah
Baxter, A A, Guston
Barnett, Nestor, Caneyville
Blane, H, Cadiz.
Bugg, T D, Bardwell
Boxley, H M, Kirksville
Campbell, D A, Bowling Green
Cole, L L, Millerstown.
Cox, L T, Owensboro
Davis, A W, Mortons Gap
Douglas, J C, Franklin
Gibson, J J, Lexington
Gourley, W W, Fulton
Griffith, B B, Paducah
Graham, Cyrus, Henderson
Hoyer, F A, Paducah
Hubbard, J M, Hickman
Kincheloe, A M, Hardinsburg
Kehm, C J, Newport.
Melton, H R, Twickliffe
Messink, W B, Worthville
Mutter, J D, Rush
O'Bannon, W B, Stanford
Overbey, Bob C, Birmingham
Pierce, H S, Salt Lick
Pennington, H V, London
Pollard, C J, Princeton
Price, W M, Dabney
Purdy, Geo, New Liberty
Risen, W J, Summersville
Rouse, Wm O, Burlington
Rogers, C W, Mineville
Rutherford, B S, Bowling Green
Sanders, H G, Campbellsville
Steele, J R, Junction City
Smith, J I, London
Tarvin, W W, Covington
Trier, B D, Hadensville
Van Deren, T H, Cynthia
Wolfe, De W, Louisville
White, J G, Cerulean Springs
Warren, I S, Somerset
Wilkinson, W C, Little Rock
Willis, Le Roy, Kleaton

LOUISIANA

Aldrich, R H, Baton Rouge
Babin, A J, New Orleans
Biscoe, A H, Alexandria
Donaldson, L T, Reserve
Eldredge, H A, Abbeville
Gaudet, C A, New Orleans
Hargrove, T B, Natchitoches
Holloway, Eugene, Plaquemine
LeBlanc, B O, St Gabriel
Lemolne, J D, Cottonport
Lazaro, L, Washington
Norman, Seaton, New Orleans
Rand, I T, New Iberla
Reynaud, B B, Baton Rouge
Scott, S M, Oakdale
Thomas, J N, Quarantine
Tusson, G J, New Orleans
Villien, J A, Maurice

MAINE

Bennett, J L, Bridgton
Bibber, R D, Bath
Barrell, D A, Auburn
Bray, C W, Portland
Porter, E A, Pittsfield

MARYLAND

Benson, B R, Cockeysville
Cook, C M, Baltimore.
Conser, C C, Baltimore
Duvall, J M, Springfield
Dill, P G, Baltimore
Gately, J E, Baltimore
Hobelmann, F W, Baltimore
Lewis, J L, Bethesda
McElfresh, C M, Baltimore
MacCalman, Duncan, Baltimore
Rohrer, C W, Baltimore
Spence, S H, Grayton
Tweedie, H V, Baltimore

MASSACHUSETTS

Adams, W C, East Taunton
Adams, Z B, Boston
Allen, C A, Holyoke
Baird, J W, Boston
Birge, W S, Provincetown
Blair, O C, Lynn
Brown, D R, Salem
Boutwell, H K, Boston
Barnes, H J, Boston
Bicknell, R D, Swampscott
Byrnes, H F, Westfield
Bailey, W C, Boston
Brayton, R W, Dorchester
Bowditch, H I, Boston
Burt, F L, Boston
Brvant, Alice G, Boston
Calkin, B H, Jamaica Plain
Cooper, Hermon, Amesbury
Davenport, B F, Watertown
Drohan, J H, Brockton
Dunning, E J, South Boston

Evans, Albert, Boston
Ewing, G. W., Peabody
Eldridge, D. G., Dorchester
Fillebrown, Thos. Boston
Flanagan, A. J., Springfield.
Gay, C. B., Fitchburg
Gillis, J. E., Boston.
Hewitt, W. O., Attleboro
Hill, I. C., Springfield
Holmes, H. F., Tewksbury
Harper, A. A., North Adams
Hoyt, W. S., Waltham
Hawley, F. J., Whitman
Howell, Thos., Worcester
Jack, L. H., West Newton
Jennings, C. H., Fitchburg
Kinloch, R. A., Springfield.
Kirby, H. C., New Bedford.
Libby, J. H., East Weymouth.
Loring, R. G., Boston.
Lyon, F. D., Boston
Lowenstein, F. P., Westfield.
Lowell, A. P., Fitchburg
Little, A. N., Newburyport.
Mansfield, J. A., Boston
MacKillop, Daniel, Cambridge.
Morris, M. A., Boston.
MacKeen, A. A., Whitman
Morris, G. P., South Boston.
Mason, N. R., Boston.
MacDermott, W. V., Salem
Marsh, A. W., Worcester
Ordway, Thos., Cambridge.
Pillsbury, W. W., Newburyport.
Patch, W. T., Roxbury
Pelce, G. A., Tewksbury
Pattrell, A. E., North Grafton
Plummer, F. J., Malden
Perry, A. P., Jamaica Plain
Quessy, A. H., Fitchburg
Richardson, W. L., Boston
Richmond, E. D., Reading
Stedman, H. R., Brookline.
Savage, G. E., Worcester
Smith, M. C., Lynn
Stone, C. S., Boston
Seely, W. C., Worcester
Smith, H. B., Boston
Sodgwick, O. W., Wales
Tilton, J. O., Lexington
Thornton, J. B., Boston
Vincent, Beth, Boston
Warren, C. E., North Daston
White, H. W., Boston
Warren, F. L., Bridgewater
Watkins, R. P., Worcester
Wheeler, C. D., Worcester
Wald, R. H., Boston
Willmsky, C. T., Boston.

MICHIGAN

Abbott, A. J., Albion
Brush, B. E., Crosswell
Clippinger, H. G., Eau Claire
Cowan, A. L., Detroit.
Coller, F. S., Vicksburg
Flinterman, Johann, Detroit.
Fletcher, John, Kalamazoo
Cesner, G. B., Marshall
Hathorn, S. R., Ann Arbor
Judd, C. H., Detroit
Hobbs, N. J., Negaunee.
Kimball, A. S., Battle Creek
Lingle, G. F., Princeton
Munson, J. F., Ann Arbor
McCauley, M. B., Covert
Martin, P. F., Imlay City
Meyer, C. M., Dowagiac.
Longstreet, M. L., Saginaw
Newcomb, W. W., Detroit
Parne, A. S., Manistee
Rich, H. W., Detroit
Sill, Joseph, Detroit
Townsend, I. S., Detroit
Tweddle, G. S., Sandusky
White, P. D., Detroit
Wagner, G. W., Detroit.
Winer, D. E., Vanderbilt
Wisner, C. A., Columbusville
Wenger, A. V., Grand Rapids

MINNESOTA

Busher, M. E., Arlington
Barnum, F. F., Pine City
Coventry, W. A., Duluth
Crosby, J. A., Minneapolis.
Cronvold, F. O., Gary
Criv, C. E., Kellogg
Hauuff, M. E., Two Harbors
Lewis, A. J., Mora
Maris, E. R., Duluth.
Pettit, C. W., Minneapolis.
Pisjord, J. N., Fertile.

MISSISSIPPI

Illie, T. C. W., Vicksburg
Cholton, G. G., Holly Springs
Green, B. F., Drew
Jackson, M. W., Water Valley
McAllum, A. W., Edwards
Marlin, B. R., Vicksburg
Mittell, T. J., Jackson
O'Leary, I. J., Vicksburg
Peele, F. B., Clinton

Ringold, J. O., Valden
Spalding, F. C., Crawford.
Wilson, H. B., Vicksburg.

MISSOURI

Athlsson, J. A., Morehouse.
Burnett, Clifton, St. Louis.
Brungs, F. H., Kansas City
Dove, O. H., Kansas City
Forayth, R. C., Kirkwood
Grote, W. F. H., St. Louis.
Hickerson, J. C., Independence.
Koenig, G. W., St. Louis
Missimore, L. E., St. Louis
Murray, L. F., Holden
Naylor, Olin, Atlanta.
Settle, C. T., Langdon.
Schlosstein, A. G., St. Louis
St. John, H. H. E., Edina.
Tiedemann, D., St. Louis.
Winter, Wm, St. Louis.
Vasterling, P. F., St. Louis

MONTANA

Pledalue, Joseph, Bozeman

NEBRASKA.

Byers, S. J., Primrose.
Egbert, C. L., Glenville.
Greene, J. M., Manley
Montgomery, W. P., Hickman
Pedersen, P. M., Dunneborg
Reeves, A. E., Iarnam

NEW HAMPSHIRE

Kittredge, F. E., Nashua.
Merrill, J. F., Warner
Rogers, C. C., Farmington
Wallace, A. L., Nashua.

NEW JERSEY

Brasfield, E. N., Phillipsburg
Dodson, L. W., Jersey City
Ellis, A. L., Metuchen
Haupling, F. R., Newark.
Knacht, Cyrus, Matawan
Keefe, S. J., Elizabeth.
Hasser, Slegfried, Newark
Loughran, A. J., Newark
McLaughlin, T. J., Jersey City
Martineti, C. D., Orange.
Randall, C. H., Newark
Salouff, S. H., Jersey City
Trainor, J. H., Newark.
Wolfson, Joseph, Jersey City
Warman, David, Trenton

NEW MEXICO

Burnham, J. L., Las Cruces
Spargo, W. W., Albuquerque.

NEW YORK.

Allen, F. L., Binghamton
Bel, I. R., Rochester
Brown, F. E., Brooklyn
Coe, H. C., New York City
Carter, W. W., New York City
Crandall, F. M., New York City
Clark, H. S., New York City
Collie, J. J., Geneva.
Comstock, F. E., Wellsville
Cook, R. G., Rochester
Collier, M. S., Rochester
Cromble, W. C., Mechanicsville.
Crosby, F. A., Lothrop.
Curtice, L. E., Buffalo
Dwyer, T. F., Buffalo
Doane, Harriet, M., Fulton
Edebohn, G. M., New York City
Fox, F. E., Fulton
Farnham, L. D., Binghamton
Gates, A. C., Kingston
Goodridge, F. G., New York City
Hunt, W. E., Little Falls
Hodgskin, E. S., Booklyn
Houghton, H. S., New York City
Hearlit, Ledra, Auburn
Huber, T. B., New York City
Jessen, W. H., Newark
Lederman, M. D., New York City
Michael, F. M., Binghamton
Monroe, N. A., Syracuse
Mann, M. D., Buffalo
Norwood, F. F., Kingston
Nery, P. M., Cortland
Pascual, J. F., Harrison
Pinker, E. H. F., New York City
Smith, L. R., Hornellsville
Smith, F. C., New York City
Valk, Francis, New York City
Ward, W. D., Rochester
Webster, H. G., Brooklyn.
Warner, L. F., New York City

NORTH CAROLINA

Avoritt, K. C., Cedar Creek
Polton, M., Ilich Square
Brooks, C. C., Sunbury
Prooks, F. H., Reldsville
Coreness, Z. M., Wakefield
George, D. S., Marshallberg
Iolt, W. P., Duke
Schanb, O. I., Foxboro

Walker, W. E., Graham
Withers, S. M., Chadbourne
Whitfield, W. C., Grifton
Whitley, D. P., Millingport.

NORTH DAKOTA

Dochterman, L. B., Williston
Stough, R. W., Verona.
Truscott, J. R., Binford.

OHIO

Bowman, D. S., Akron
Bower, R. D., Chillicothe
Berndt, D. A., Portsmouth.
Bayliff, J. E., Unipollis
Crabill, T. V., Osborn
Beer, J. D., Wooster
Calhoun, W. M., East Liverpool
Chaney, G., New Guilford.
Davis, J. H., East Liverpool
Dodd, V. A., Columbus
Dickinson, T. F., Cincinnati.
Dromgold, S. T., Elmore.
Erdman, R. F., New Richmond
Eunns, E. W., Columbus
Lund, Glaeser, B., Cincinnati
Goodrich, G. I., Canal Dover
Gabriel, H. C., Columbus.
Gooding, J. J., Gilmore.
Hodges, C. W., Hamilton
Harris, I. B., Columbus
Hoover, C. M., Alliance.
Hamilton, E. A., Columbus
Hoopes, Carl W., Marysville
Hoffline, J. O., Columbus.
Hamilton, David, Blair, Mason
Hinnen, G. A., Cincinnati
Ingles, W. D., Columbus
Kunz, J. C., Cincinnati
Krebs, P. H., Cleveland.
Keenan, W. H., Caldwell
Lockhart, J. M., Eckmansville
Lupton, Ella G., Gallipolis.
McCafferty, Frank, Columbus
McClellan, Wilson, M., Ashland
McTearge, N. T., New Lexington
Nelson, A. W., Cincinnati.
Nevin, W. C., Lisbon
Oglesby, N. P., Columbus.
Oman, E. S., Columbus
Ellison, S. J., Harveysburg
Peelle, F. A., Wilmington
Powell, C. F., Dayton
Reedy, Clifton, Columbus
Stauffer, Gilman, W., Akron
Scott, C. B., Londonville
Solar, F. M., Cincinnati
Thone, J. A., Columbus
Thomas, J. M., Columbus.
Temple, J. C., Alliance.
Teeters, C. A., Jeffersonville.
Tribbet, C. A., Westboro
West, S. L., St. Clairsville.
Weller, J. N., Akron
Williams, D. A., Franklin
Wickham, Wm., Toledo
Wray, K. M., Columbus
Wood, G. W., Wilmington
Whelan, R. E., Youngstown

OKLAHOMA

Mueller, J. A., Snyder
Runkle, R. E., El Reno
Warhurst, M. A., Remus

OREGON

Rentz, E. B., Frost Grove

PENNSYLVANIA.

Burnham, C. G., Jeannette.
Barney, E. R., Wattsburg
Craik, C. R., Philadelphia.
Donnelly, Florence, E., Conshohocken
Detrick, F. A., Cresson.
Finn, J. F., Erie.
Gordner, Frank, Montgomery
Clower, O. W., H., Laurelton
Gensimore, C. W., New Enterprize
Henderson, F. N., Norristown
Hogue, D. A., Altoona
Howe, Wm, Shingle House
Hemmering, Geo, Carlisle.
Hoffman, C. W., Rimersburg
Kistler, E. H., Lansford
Johnson, F. C., Wilkesbarre
Loeb, Ludwig, Philadelphia.
Lyons, Fowler, Turbotville.
McKea, M. A., Oil City
McWhatten, S. P., M., Idavland.
Mitchell, S. Weir, Philadelphia
Maine, C. L., Helvetia.
Mathott, G. H., Mare.
Nielsen, L. B., Honesdale.
Patterson, F. D., Philadelphia.
Peterman, J. H., Grant.
Ridpath, R. F., Philadelphia.
Ramsay, W. S., Coraopolis
Rutherford, J. Frank, Bishop
Shearer, W. L., Reading
Sherman, Jeanette, H., Norris town

Ward, E. L., Osceola
Woods, A. B., Erie
White, Amy E., Chester
Walker, C. I., Sharon
Welda, I. J., Emaus
Woods, G. B., Curlsiville.

PHILIPPINE ISLANDS

Edwards, R. T., Manila.

RHODE ISLAND,

Buffum, W. H., Providence
DeWolf, H., Providence.
Gomberg, M. B., Providence
Phillips, J. L., Providence
Rogers, F. W., Newport.

SOUTH CAROLINA.

Shaw, A. E., Columbia.

SOUTH DAKOTA

Bobb, C. S., Mitchell.
Frink, R. P., Wagner
Madden, Edith L., Cherry Creek

TENNESSEE

Burke, R. A., Dyersburg
Beasley, M. A., Hampshire
Cotten, L. D., Sparta.
Coble, T. J., Shelbyville.
Capps, J. M., Nashville.
Cochran, T. N., Holly Leaf
Gibbs, Vaulx, Chattanooga.
Haskins, E. T., Newbern.
Hogshead, J. McC, Chattanooga
Hope, W. T., Chattanooga.
Johnson, J. W., Chattanooga
King, R. W., Gordonsville.
Kennedy, W. T., Johnson City
Long, E. A., Johnson City
McGrew, S. J., Shelbyville.
Pearson, S. S., Rossyville.
Robertson, E. A., Chattanooga.
Shugart, J. L., Cleveland
Taylor, W. B., Greeneville
Walker, D. A., Trenton
West, J. Q. A., Knoxville

TEXAS

Acheson, A. W., Denison
Bailey, R. H., Gainesville
Blanton, J. J., Buda.
Bristow, W. C., Athens
Bell, B. F., Whitehouse
Bryan, T. F., Iredell
Brown, J. P., Guatine
Cooke, E. F., Forresteron
Camp, Jim, Pecos.
Cates, S. R., Abilene
Cox, Marion L., Canton
De Long, A. C., Winters
Elliot, J. R., Palacios.
Fildman, F. G., Houston
Hoard, W. R., Sherman
Hanna, I. J., Amarillo
Homan, D. C., Oglesby
Holman, J. C., Franklin
Hudkins, D. H., Forney
Howard, W. R., Fort Worth
Harper, J. R., Roston
Hovell, R. L., Snyder
Jordan, D. M., Oglesby
Klein, Nettie, Texarkana
Lockett, W. A., Amarillo
Merrill, T. C., Colorado
Miller, J. N., Cade.
McGee, T. F., Amarillo
Morrison, T. A., Grosvenor
Mahon, Lytton, S., Jonesboro
Milburn, J. R., Ector
Matthews, Y. A., Atlanta
McClung, R. L., Atlanta
Parker, P. E., Bay City
Priester, W. G., Houston
Richardson, J. A., Seymour
Strong, Sneed, Bowie
Steele, E. H., Jennings
Small, A. B., Waxahachle
Schmoeller, W. Sealy
Taylor, T. B., Elgin
Teas, T. M., Denison
Worsham, J. P., Corsicana
Wood, J. H., Hubbard
Williams, C. B., Mineral Wells
Witte, B. E., San Antonio
Williams, E., Celeste
Wheeler, J. Smilie, Coryell
Young, W. M., Dallas

UTAH

Clift, Frederic, Provo

VERMONT

Harvard, H. H., Tunbridge

VIRGINIA

Belt, H. S., South Boston
Croston, W. E., Wakema
Huff, I. F., I oanoke
Jordan, S. R., Virginia
Mercer, C. W., Blackstone
Williams, W. L., Brook Neal
Wallace, A. McC, Cate City
Womack, J. H., Spring Garden

B W Woodburn, M D (Thirty three Years' Practice, Kentucky, 1891) died at his home in Bremen, Ky, February 24, from heart disease, aged 73

Albert D Hill, M D Albany (N Y) Medical College, 1870, died suddenly at his home in Chicago, March 4, from heart disease, aged 57

C D Osburn, M D Jefferson Medical College, Philadelphia, 1896, died at his home in Wilsonville, Ore, February 10, from acute gastritis

George L Newcombe, M D Harvard University Medical School, Boston, died at his home in North Scituate, Mass, February 21

N Lee Howison, M D State University of Iowa, Medical Department, Iowa City, 1882, died at his home in Bogata, Texas, February 19

David McClenchon, M D Starling Medical College, Columbus, Ohio, 1867, died at his home in Cedar Rapids, Iowa, February 25, aged 86

Death Abroad

S S Rosenstein, M D, professor of experimental pathology and pathologic anatomy at Leyden, died January 31, aged 74. He was a native of Berlin and privat docent at the university until he accepted a call to Holland in 1865. His greatest work was a treatise on pathology and treatment of kidney affections, 1863, which has been translated into several languages. Among his other numerous works are several on diabetes, cirrhosis of the liver, etc. and his pupils, de Jong and de Haan, have also made notable contributions to the pathology of digestion and metabolism

Book Notice

PSYCHIC TREATMENT OF NERVOUS DISEASES, P. DuBois. Translated and edited by S E Jelliffe, M D, Ph D, and W A White, M D. Cloth. Pp 466. Price, \$3.00 net. New York: Funk & Wagnalls Co. 1905

In these days when so much has been said and is still being said in regard to suggestion in medical treatment this translation of Professor DuBois' work on the psychoneuroses and their moral treatment is timely. It differs decidedly from much of the literature on the subject that is so familiar to us. There is no claim of the virtues of hypnotism. The author's methods are not mysterious, but are based on common sense principles, accepting as he does the amenability of a large class of diseases to mental influences rationally employed. In so far, however, as it is a protest against physical methods in these special disorders it may not command absolute agreement with its demands on the part of all its readers. Every skilled practitioner must be well aware of the value of moral treatment in many cases, and there are few, if any, who do not consciously use it in their practice. A very large number will, nevertheless, find the work very suggestive and profitable reading, even if they can not follow the author in all of his views.

The first six or seven chapters, comprising about one fifth of the volume, are not strictly medical, but rather psychologic. In these the author develops his ideas that have led him up to the therapeutic position he has taken and which he considers an essential introduction to the more practical part of his work. It does not follow, however, according to his own statement, that it is necessary for the success of his methods that the physician employing them must be like him, a materialistic monist and determinist, and those, therefore, who may find themselves disagreeing with his very pronounced opinions may still derive profit from his book.

The psychotherapy which he calls rational is addressed directly to the reason of the patient, and depends very largely on the tact and sympathy of the physician—fully as much as on his faith in his theories and methods. The patient must be inoculated with the idea that his case is a curable one, his exaggerated susceptibilities must be toned down and, while DuBois does not specially favor the use of drugs and ridicules their use in many of these conditions, he does not neglect the advantages of certain physical measures such as environment, etc. Thus he employs a modified Weir Mitchell method, without any special dependence on electricity and massage measures, and places the principal stress on purely moral treat-

ment with rest and good nutrition in a well regulated sanitarium. In fact, he rather condemns, for many cases, the employment of even elaborate clinical examination methods as tending to produce a mental condition unfavorable to the psychic treatment. He employs his treatment not only in cases clearly hysterical and neurasthenic, but also in conditions that are sometimes considered organic, such as mucous or so called membranous colitis, which, according to his observation, is mainly the result of habitual constipation. It is probable that some of our specialists in rectal diseases may think his observation imperfect in some of these cases.

Take it as a whole, however, Professor DuBois' work makes a very good showing for moral treatment in a very large class of disorders not dependent on determinable permanent organic changes. Whether every practitioner will be able to go his length in the rejection of drug medication and certain physical agencies is, perhaps, a question, and it certainly will require more than usual diagnostic skill to exclude a possible element of organic disease in many of these cases. The book is one, however, that few judiciously minded physicians can read without profit. It is beautifully written and the translation seems to very fairly reproduce the spirit as well as the accurate text of the original. The obtrusiveness of the author's religious heterodoxy, which is not an essential feature in a work of this kind, might well have been omitted. But Professor Dejerine says in his preface that DuBois is "a man with convictions," which he is not afraid to express in religious as well as in other matters. We have also the same authority as evidence that Dr DuBois has resolutely and thoroughly carried out his ideas in his therapy and as it here appears with great success.

Miscellany

Diseases of the Indians.—At a joint meeting of the Medical and Anthropological societies of the District of Columbia, Dr Ales Hrdlicka read a paper on this subject. His information was derived partly from personal observation and partly from data furnished by physicians in the Indian service. He said that on the whole the health of the Southwestern and North Mexican uncivilized Indians is superior to that of the whites living in larger communities. The Indian's advantage lies chiefly in the greater freedom from those morbid conditions that arise through defective heritage, from those that in the white race frequently accompany teething, puberty, menstruation, gestation, menopause and senility, and from malignant growths, while the only disadvantage of the Indian consists in a possibly lesser resistance to some of the contagious diseases, notably smallpox and measles. He stated that pathologic conditions of the blood are rare, but that anemia is occasionally met in the later stages of malaria or in a slight degree in some of the taller schoolgirls who have become debilitated. Occasionally the thyroid degenerates into goiter. The lymph glands appear to be the seat of only one affection, and that scrofula, even this is rare. The prostate was found enlarged in only a few instances. Affections of the mammary gland are much less common than in white women. Diseases of the circulatory system are very infrequent but, on the other hand, respiratory affections are relatively common and cause numerous deaths. Varicose veins are rare, as are hemorrhoids. Disorders of the digestive apparatus, he states, are more common than any other disease of the Indians, but except in infants they are rarely serious. Typhoid is uncommon though forms of bloody diarrhea or dysentery, often probably of malarial origin, attack Indians of certain localities, especially in the lower parts of Mexico. Intestinal parasites are seldom heard of. Kidney disorders in pregnancy, and eclampsia are rare. Diseases of the skin are chiefly limited to eczema, favus or ulcers, in the children, acne in young adults, and ulcers due to neglect in the older. Headache is common, but epilepsy, insanity and paralysis are rare, and idiocy is almost unheard of. Strabismus is very rare. Narrowing of the lids from chronic conjunctivitis is common in old people. Corneal ulcerations and opacities are not infrequent and occa-

sionally cataract is seen Defect of the palate in a full blooded Indian has never been seen and only one case of minor hare lip was observed Except syphilis and gonorrhea, diseases of the sexual organs are seldom indicated by any external sign, among those who approach or are approached by a physician Notwithstanding the unhygienic condition of the Indians, neither gonorrhea nor syphilis is commonly attended by great destruction of tissues or by grave general consequences Signs of hereditary syphilis in children are uncommon Syphilis in the Indians affects the bones as it does in the whites, therefore, if syphilis existed before the Spaniards reached this country, signs of it should be at least occasionally discovered in the ancient burials But the bones of the old burial places are, as a rule, free from any sign of the disease, and this is true of the bones from ancient graves in California, northwest coast and other localities, exclusive of some mounds It is difficult to see, if the disease existed before the whites came, how, with the well known wide intercourse among the Indians, whole great regions could escape it. It may be remarked that it is also absent in the older burials from Peru and other localities in South America

Ultimate Fate of Tetany Patients.—At a meeting of the Vienna Medical Society, January 25, von Frankl Hochwart reported the results of recent investigation into the present condition of all the patients with tetany whom he has had under his care He was able to learn the fate of 55 out of the total 160 Eleven had died, their lives considerably shorter than the average for their circumstances and occupations It is possible, he thinks, that the tetany may have induced a constitutional weakness which rendered the subjects less resistant to mild infectious diseases Of the remaining 44, letters were received from 7, and 37 were personally examined. Only 14 of the entire number are healthy, with 4 only partially so, 19 present tetanoid conditions, some exhibiting a kind of chronic debility suggesting myxedema, and 7 suffering from recurring tetany, the attacks coming on most frequently in the winter months In none of the cured cases is there enlargement of the thyroid, but it is frequent among the others One of the tetany patients has a child who also exhibits tetany His experience has been that the epidemics of tetany occur during a few years at a place and then subside to crop up somewhere else He preaches that the prognosis of tetany is not so favorable as generally taught, the ultimate findings in his 55 cases having materially modified his views The *Wien Klin Wochts* for February 8 contained a report of the meeting

Fatal Suprarenal Hemorrhage from Sunstroke.—Prof A. Sodré of Rio has been making a special study of "thermic fever," "febre de calor" as he calls it, the result of sunstroke or heat stroke On several days in last December there were as many as 10 cases a day at Rio de Janeiro The autopsy findings in one case, reported by S Moniz in the *Revista Medico-Cirurgica do Brazil* for December, showed that death was due to hemorrhage from the suprarenal capsules The patient was a man of 30, working out of doors when overcome by the heat His temperature was 41.6 C (107 F) and he was in convulsions when first seen General asthenia and intense thirst continued for four days, the heart action weak but distinct, no albumin or sugar in the urine. Slight improvement was noted the fourth day, but the patient died suddenly while at stool The viscera were found comparatively normal with the exception of the suprarenal capsules which had ruptured from the pressure of a large hemorrhage.

Queries and Minor Notes

HAGER'S CORYZA REMEDY

A correspondent asks about Hager's coryza remedy Olfactorium antitartaricum (Hager) is no doubt the preparation intended A small wide-mouth vial is filled one-third full of the following solution

R Phenol	
Alcohol	5i
Aqua ammonia	5iii
Aqua dest.	5r

The vial is then filled with a plug of cotton for inhalation in coryza catarrh and similar affections

State Boards of Registration

COMING EXAMINATIONS

MAINE State Board of Registration of Medicine City Building, Portland March 13 Secretary, Wm J Maybury, Saco
CONNECTICUT Medical Examining Board, City Hall, New Haven, March 12-14 Secretary, Charles A Tuttle, New Haven.
MASSACHUSETTS Board of Registration in Medicine, State House, Boston, March 12-14 Secretary Edwin B Harvey, Boston

Alabama Report.—Dr W H Sanders, chairman of the State Board of Medical Examiners of Alabama, reports the written examinations held by the county and state boards of Alabama during the year 1905 The number of subjects examined in was 10, number of questions asked, 6 to 10 in each branch or subject, percentage required to pass, 75 The total number of candidates examined was 154, including 14 non graduates, of whom 131 passed and 23 failed, including 1 osteopath The following colleges were represented

College.	PASSED	Year Grad.	Per Cent.
Medical College of Alabama, (1903) 92 (1904) 78 81, 82, 83, 92, (1905) the grades of 76, 80 and 81 were reached by one each, 82 and 88 by two each, 84 and 85 by one each 86 by five, 87 by three 88 by two 89 by three, 92 and 93 by two each, and 95 and 98 by one each			
Leonard Med Coll.	(1905) 76, 82, 83		
Chattanooga Med Coll (1902) 80 (1905) the grade of 76 was reached by three, 82 by one, 83 by two and 84 and 88 by one each			
Memphis Hosp. Med. Coll., (1899) 82, (1904) 88, (1905) 78, 83, 93			
College of P and S Atlanta (1905) 76, 83, 87, 89			
Vanderbilt University (1890) 84 (1905) 84, 84, 85, 95			
Birmingham Med. Coll (1905) 80 85 85 87 88 91 91			
Meharry Med. Coll. (1905) 76 78, 78, 82, 83, 86, 88			
Grant University (1905) 79, 88			
Knoxville Med. Coll (1901) 79			
University of the South (1904) 82, (1905) 85, 90, 91			
Cornell University (1905) 89			
University of Virginia (1897) 87, (1903) 86 (1906) 85, 89			
University of Missouri (1904) 88			
Rush Med. Coll (1889) 91 (1904) 86			
Louisville Med Coll (1885) 75, (1888) 88, 88, (1905) 86, 90			
Louisville Hosp. Med. Coll (1905) 92			
Baylor Med. Coll (1905) 76			
University of Nashville (1905) 84, 85 90 91, 92, 92			
University of Louisville (1904) 84 (1905) 86			
Tulane University (1905) 75 75 82, 88 90, 96			
Johns Hopkins University (1905) 89			
College of P and S, New York (1905) 90			
Baltimore Med Coll (1905) 90			
Kentucky University (1905) 88			
Maryland Med. Coll (1905) 82, 95			
Chicago Homeo Med Coll. (1900) 80			
Beach Med. Institute Indianapolis (1886) *83			
Kentucky School of Med. (1888) 79			
Herring Med. Coll (1898) 77			
University of Pennsylvania (1904) 89			
Jefferson Med. Coll. (1904) 91			

College.	FAILED	Year Grad.	Per Cent.
Chattanooga Med. Coll (1901) 65 (1905) 71, 71			
Memphis Hosp. Med. Coll (1902) 69			
University of Nashville (1901) 62 73			
Louisville Med. Coll (1891) 70			
Medical College of Alabama (1905) 68 72			
Meharry Med. Coll. (1905) 61, 61			
Rush Med. Coll (1905) 70			
Atlanta Med. Coll (1893) 61			
College of P and S Keokuk (1891) 65			
University of Tennessee (1901) 68			
Barnes Med Coll (1885) 70			
Georgia Coll of Eccl Med. and Surg (1897) 22			

* This school merged with Indiana Eclectic Med Coll in 1886

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers U S Army week ending March 3 1906
Kirkpatrick, Thos J asst. surgeon granted thirty days leave of absence. Reported for treatment at Army General Hospital Washington Barracks, D C
Thorp, Charles W contract surgeon, returned to Fort Pithan Allen Vt. from sick leave.
Enders, William J contract surgeon left Fort Morgan, Ala., on leave of absence for one month, ten days
Wall, Francis M. contract surgeon left Fort Oglethorpe, Ga on leave of absence for eight days.
Whannery, Jean C dental surgeon left Fort Wright, Wash for duty at Fort Stevens Oregon
Ware, William H dental surgeon returned to duty at Fort Logan Colo., from leave of absence.
Lowe, Charles J. dental surgeon left Fort Snelling Minn for duty at Fort Harrison, Mont.
Rietz, Hugo C. dental surgeon left Fort Sheridan Ill., for duty at Fort Thomas Ky
Raffler, Edward, contract surgeon granted leave of absence for four months

Long, Stephen M., contract surgeon granted leave of absence for one month
 Stuckey, Harrison W., contract surgeon returned from temporary duty at Fort Assiniboine, Mont. to Fort Snelling, Minn.

Navy Changes

Changes in the Medical Corps, U. S. Navy for the week ending February 1, 1906.

Field, T. G. ordered to the Bureau of Medicine and Surgery, Navy Department.

Chapelier, J. D. acting assistant surgeon appointed acting assistant surgeon from Feb. 28, 1906.

Nash, T. S., surgeon, detached from the *Oregon* and ordered to the *Katibor*.

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending Feb. 28, 1906.

Pettus, W. J., assistant surgeon general, granted leave of absence for one month from March 1.

Magruder, G. M., surgeon, on expiration of leave of absence to proceed to Portland, Ore. and assume command of the service.

Nickles, J. A., I. A. surgeon, to proceed to Perth Amboy, N. J., for special temporary duty, on completion of which to rejoin station at Stapleton, N. J.

Coffey, L. I., I. A. surgeon, granted one day leave of absence under Paragraph 159 of the Regulations.

Korn, W. A., P. A. surgeon, granted leave of absence for four teen days from March 2.

Long, J. D., P. A. surgeon, granted seven days leave of absence in December, 1905, under Paragraph 191 of the Regulations.

Burkhalter, J. T., P. A. surgeon, on being relieved by Asst. Surgeon R. D. Spratt to proceed to Pills Island, N. J., reporting to the medical officer in command for duty.

Spratt, R. D., asst. surgeon, relieved from temporary duty at Mobile, Ala. and directed to proceed to Brunswick quarantine station and assume command of the service, relieving P. A. Surgeon J. T. Burkhalter.

Delgado, J. M., acting asst. surgeon, granted four days leave of absence from February 13, under Paragraph 210 of the Regulations.

Kurtz, W. F., acting asst. surgeon, granted leave of absence for thirty days from January 1 on account of sickness.

Richardson, N. D., acting asst. surgeon, granted leave of absence for fourteen days from January 27 on account of sickness.

Safford, M. V., acting asst. surgeon, granted three days leave of absence from February 17, under Paragraph 210 of the Regulations.

O'Gorman, T. V., pharmacist, relieved from duty at New Orleans, La. and directed to proceed to Memphis, Tenn., reporting to the medical officer in command for duty and assignment to quarters.

Scott, E. B., pharmacist, granted two days leave of absence from February 21, under Paragraph 210 of the Regulations.

BOARD CONVENED

Board convened to meet at the Bureau, Washington, D. C., February 24 for the purpose of making a physical examination of an officer of the Revenue Cutter Service. Detail for the board: Assistant Surgeon General W. J. Pettus, chairman, Assistant Surgeon T. W. Trask, recorder.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service during the week ended March 2, 1906.

SMALLPOX—UNITED STATES

California, Los Angeles, Feb. 10-17, 5 cases, San Francisco, 12 cases.

Delaware, Wilmington, Feb. 17-24, 2 cases.

District of Columbia, Washington, Feb. 10-24, 0 cases, 1 death.

Florida, Jacksonville, Feb. 17-24, 5 cases.

Kentucky, Covington, Feb. 15-22, 1 case.

Louisiana, New Orleans, Feb. 17-24, 11 cases.

Maryland, Baltimore, Feb. 17-24, 7 cases.

Massachusetts, Boston, Feb. 17-24, 1 case.

Michigan, Ann Arbor, Feb. 17-24, 1 case.

Ohio, Cincinnati, Feb. 16-23, 2 cases.

Tennessee, Memphis, Feb. 17-24, 8 cases, 1 death.

Virginia, Petersburg, Feb. 1-26, 17 cases.

Wisconsin, Appleton, Feb. 17-24, 2 cases, Green Bay, 3 cases.

SMALLPOX—FOREIGN

Africa, Cape Town, Jan. 6-20, 10 cases.

Canada, New Brunswick, Kings County, Feb. 18, present.

Queens County, present, Sunbury County, present, York County, present, Toronto, Feb. 10-17, 2 cases, Winnipeg, 1 case.

Chile, Iquique, Jan. 20-27, 4 deaths.

China, Shanghai, Jan. 13-20, 1 case, 1 death.

Ecuador, Guayaquil, Jan. 28, Feb. 4, 5 deaths.

France, Paris, Feb. 3-10, 11 cases.

Gibraltar, Feb. 4-11, 5 cases, 2 deaths.

Great Britain, Bristol, Feb. 3-10, 1 case.

Greece, Athens, Jan. 22, Feb. 5, 5 cases.

India, Bombay, Jan. 23-30, 10 deaths, Calcutta, Jan. 13-20, 55 deaths, Karachi, Jan. 21-28, 9 cases, 3 deaths, Madras, Jan. 20-26, 22 deaths, Rangoon, Jan. 13-20, 38 deaths.

Italy, General, Feb. 1-8, 33 deaths, Rome, Dec. 16-23, 1 death.

Russia, Moscow, Jan. 20, Feb. 3, 12 cases, 1 death, Odessa, Feb. 3-10, 23 cases, 1 death, St. Petersburg, Jan. 27, Feb. 3, 4 cases, 3 deaths.

Spain, Barcelona, Feb. 1-10, 5 deaths, Seville, Jan. 1-30, 11 deaths.

Turkey, Alexandretta, Jan. 27, Feb. 3, 20 cases, 4 deaths, Constantinople, Jan. 28, Feb. 11, 11 cases.

YELLOW FEVER—FOREIGN

Cuba, Habana, Feb. 11, 1 case.

Ecuador, Guayaquil, Jan. 28, Feb. 4, 9 deaths.

CHOLERA—FOREIGN

India, Calcutta, Jan. 13-20, 43 deaths, Madras, Jan. 20-26, 2 deaths.

PLAGUE—FOREIGN

India, General, Jan. 1-20, 4,652 cases, 3,938 deaths, Bombay, Jan. 23-30, 62 deaths, Calcutta, Jan. 13-20, 32 deaths, Karachi, Jan. 21-28, 7 cases, 6 deaths, Madras, Jan. 20-26, 3 deaths, Rangoon, Jan. 13-20, 23 deaths.

Russia, Province of Astrakhan, Dec. 23, Jan. 2, 8 cases, 5 deaths.

Medical Organization

Good Conditions in Texas

Dr. DAVID R. FLY, Amarillo, Texas, one of the councilors of the State Medical Association of Texas, under date of February 23, writes:

"I find that Dr. McCormack's system of holding public meetings is a marvelous success. I find that the securing of the interest and co-operation of the intelligent laymen to be a strong factor in the lining up and settling of local animosities among the profession. It is remarkable how quick the intelligent public seem to grasp the situation and declare themselves ever ready to lend their support and co-operation in all of our legitimate reforms. I have been very agreeably surprised in the amount of interest and sympathy shown to me in the trials and tribulations of my councilor work by the thoughtful and progressive laymen."

Judging from newspaper clippings that have been sent us from Dr. Fly's district, he is one of the active councilors and is doing much good, not only in organizing societies in his district but in stimulating them to active work. He follows the lead of Dr. McCormack in having meetings to which the public is invited, which are evidently doing good, developing a better feeling between the public and the profession. Undoubtedly this is an excellent thing to do. What is needed to day is for the profession and the public to get closer together, and for those who write in the newspapers on medico-sociologic subjects to know more of what the profession is doing. One of the best ways to bring about this better feeling is by having these open meetings, allowing some one to represent the public on the program.

Society Proceedings

BOSTON MEDICAL LIBRARY MEETING

Held Feb. 14, 1906

Dr. GEORGE W. GAY in the Chair

The Sanitary Hygiene of the Japanese Army

CAPTAIN CHARLES LYNCH, Asst. Surgeon, U. S. A., was assigned as medical observer in the recent Russo-Japanese war and was with the Japanese eleven months, both in Japan and in Port Arthur. He described the organization of the Japanese army, with its active force, in which each man serves three years, and its reserve force. There is a ministry of war with several departments, of which the medical department is one, co-ordinate with the others. The unit is the division. Usually there were three divisions to an army. Each division maintained its communications with home when in the field. There is no quartermaster's department. The system proved a good one in war. Large numbers of men were sent forward at once, fully equipped.

The medical personnel consisted of military surgeons, men who make a specialty of the subject and who make preparations for war in time of peace. These are on the active list, and ten are assigned to each regiment. This is too many for times of peace, but not enough for war. Therefore, there is a reserve medical staff. These men must have seen actual service, but practice at their homes, except during the maneuvers held regularly every year. These reserve medical officers did well. At the outbreak of the war the active list were assigned to administrative duties. The demand for reserve men was so great that civilians were needed. These men passed an

examination and a service of four months in a hospital. They were to be employed in hospitals only, but this was not always possible, and hence their service was not wholly satisfactory. Reasons for this were that they asked for things not usually provided, were not hardened to camp life and were not respected by the troops as were the regular active and reserve surgeons. In spite of this large medical staff located at the front, along the lines of communication and at the bases, there were not enough.

The surgery of Japan is not strictly up to date. There is no great need of it. Japanese medical students rarely study surgery abroad, but they do give much attention to pathology and bacteriology. The surgeons always do things the easiest way. Confusion reigns in the operating rooms. They make large use of the microscope, however, and use medicines freely. By the offer of a good salary they try to attract to the regular active list good men, and they are given adequate rank to secure a right to their opinions. At the head is a surgeon with the rank of lieutenant general. The chief executive is a major general, being one of three in an army. Thence on down the surgeons of a regiment rank as captains. Each of these men must have spent at least one year in the Army Medical School. Here they are encouraged by special courses to become specialists along some particular line. They are allowed to do some outside work as consultants. Promotion is partly by selection. The reserve surgeons are promoted on proof of ability. They are about the equals of their brethren in civil life.

Apothecary officers are graduates of a college of pharmacy. Their highest rank is colonel. There were large numbers of them in the war and they did good work.

There is no hospital corps. At home civilians are hired. In the regular army, men are instructed in hospital work in each company. These soldiers were the chief nurses and they were well disciplined, though not much trained. They did well at the first. Female nurses are practically confined to the Red Cross. Some regular officers were detailed to attend to matters requiring immediate expenditure, among them being a few line officers. In time of peace four men in each company are trained as bearers.

The Red Cross of Japan, which renders voluntary aid, is the best in the world. It has over a million supporters and an income of more than 8,000,000 yen. It furnishes mainly personnel and not materials. Its work is wholly at the bases and along the lines of communication, hospital ships, etc. Each relief detachment consisted of two physicians, one pharmacist, two chief nurses and twenty nurses or attendants. There were 152 such detachments, thirty-two being along the lines and in Korea, thirty-eight in the great army hospitals and the rest scattered. At the end of 1905 they had 4,700 male and female nurses and attendants and had expended over \$2,500,000. Their nurses are the best in Japan, though not equal to ours.

The Ladies' Volunteer Nurses' Association supplemented the Red Cross. Germany too, aided. Much medical advice by prominent men in the profession outside of the army was offered free and gladly accepted. Many men, professors in the medical schools and of like standing, acted as consultants.

All matters pertaining to the health of the army, whether sick, wounded or apparently well, were made subjects of strict rules. Most of the medical supplies were prepared at Tokio, sent to Dalny and thence forwarded. The quality was carefully inspected and noted, being determined by frequent analyses. Transportation was ably maintained. Hospital buildings were erected very rapidly. Contracts for such buildings are made with all the specifications to be fulfilled if they are needed and only two or three days are necessary, therefore, for their practical completion.

The Japanese appreciate the importance of hygiene and public sentiment supports the enforcement of strict rules. Whoever comes home from the front suffering from a preventable disease is disgraced. They maintain three requirements—physical fitness, education and supervision. The physical standard is high yet few are rejected.

Sanitary instruction of officers is not necessary. They are all informed having learned in schools and colleges. A pamphlet "Health Rules for the Use of Soldiers in Time of War," is provided for the common soldiers, three or four to every company. They are told of the risks and an appeal is made to

their patriotism. There are directions as to cleanliness, physical training and exercise. They have a hard drill, including much running. Special training in sanitation is given the officers, who have executive functions in these matters as well as advisory ones. The division chief surgeons are the real chief inspectors. The army chief surgeons follow them up and civilian specialists are often called in. Boards of health are established, who seek to rid the army of the unfit. Even field hospitals are equipped with microscopes and laboratories far toward the front. Typhoid fever was less common and dysentery more frequent. There were many diseases common among the Chinese of Manchuria, like cholera and malaria, which were thus kept out of the Japanese camps.

The soldiers were well fed. Rice was the bulk of the ration, being brought from Japan. Little meat, plenty of fruit, sometimes barley in place of rice, some saké and tobacco—the total ration being capable of 2,580 calories. The army is better fed than the people at home. Good water is always sought, analyzed frequently, both chemically and bacteriologically, and in a great majority of cases is boiled before being used—sometimes twice boiled. This boiled water was conveyed in carts holding sixty liters, two for each company. Some use was made of special tablets for purifying the water, but unsuccessfully. More valuable were filters, by which means they did do something in cutting out bacteria. Once the water supply was selected, every unauthorized person, whether native or soldier, was kept away from it.

In the barracks earthen jars were provided for the dejecta, regularly cleansed. In Manchuria large pits were provided. The Chinese were everywhere very filthy. The habits of the Japanese were good. Saké rarely made them drunk. There was little license. Bathing was common. They took good care of their feet, though their shoes were very bad. The best of rules were made and enforced. A monthly physical examination of the soldiers was made. They tried to prevent the water-borne diseases and were most successful. Such patients were isolated to avoid contact as carefully as if they had smallpox. They were screened, carbolic acid was used freely, and also antiseptics for hands and dishes. Special precautions to keep flies from meats and from bedpans were taken. As fast as necessary they were sent back toward the base.

Typhoid fever and dysentery are endemic in those regions, but the Japanese had only one-sixth as many cases as the Russians. This, too, in spite of the fact that they made large use of the Chinese houses. Infection from urine was not considered or proved to be of great importance. There was a constant use of creosote pills, the boxes of which were marked "To defeat the Russians, take one pill three times a day." Typhus is always present in Manchuria and was isolated in the same way. Beriberi was the great and terrible scourge of the Japanese. Much study was devoted to it and three different germ causes were discovered. None of them was proven to be the cause. It is not promoted by any special diet, but seems to be like typhus, taking its origin in crowded conditions. It was the cause of 40 to 50 per cent of all the sickness in the army, and often preceded other diseases. Smallpox was rare because of compulsory vaccination. This is done in Japan within 100 days of birth, at the age of 12 or 13 and again at time of conscription. Two or three attempts are required, if necessary. In 1905 a general revaccination was practiced. Japanese virus is good.

Tuberculosis was common. It spread because they do not use modern methods of sanitation for its treatment. Diphtheria was not rare, but there was no measles, mumps nor scarlet fever. Recurrent fever occurred only rarely and was isolated. Erysipelas and tetanus were even rarer. Leprosy is frequent in Japan, but was not met in the army. Influenza was common, but not severe. Manchurian fever seems to be a combination of influenza and typhoid. Influenza was not isolated. Cerebrospinal fever and malaria were rare. There were few venereal cases. Prostitutes were segregated and regularly examined, as in Japan. Trachoma, so common in Japan, was not met in the field. As a whole, the medical department did remarkably well. The records made are very complete and sometime they may be given to the world.

In December 1905 it was reported that so far in the war there had been killed in action 43,219, wounded in action

153,673 missing, 5,081, injured not in action, 16,456, sick or died from sickness included 203,207, with 17,860 cases of contagious diseases besides. This makes the disability from wounds and from disease about equal—a very remarkable result.

The medical methods employed are much like ours. They are prone to allow patients to sit up, which was especially bad for the beriberi hearts. The mortality from typhoid was 7 to 10 per cent, from dysentery, 15 to 17 per cent. Most of the wounds were from rifle balls, though the number from shells, especially shrapnel was unusually large. Hand grenades, too, were the causes of many terrible wounds. Bayonet wounds constituted not even 1 per cent of the total. The proportion of killed to wounded was as 1 to 4, and of the wounded 16 per cent died. Bone wounds suppurred almost invariably. They had a bad "first aid" package—compresses were small, the bandage was insufficient and the cloth cover was not impervious to water. There were few deaths from primary hemorrhages but many frost bites. To summarize: Their success seems due to good diagnosis, Red Cross aid, medical skill, prompt aid, no confusion, good preparation in time of peace, large personnel, free expenditure of money, good hygiene and readiness to learn by experience.

NEW YORK PSYCHIATRICAL SOCIETY

Regular Meeting, held in New York, Dec 6, 1905

Insanity as a Result of Hysterotomy and Oophorectomy

The paper on the above subject, read by Dr. Graeme M. Hammond, New York, appears in this issue of THE JOURNAL, pages 713 and 714.

DISCUSSION

Dr. G. H. Kinn said that he has seen eight cases in which the psychoses seemed to be more or less directly connected with operations on the generative organs. In four of these cases it was impossible to determine whether the ovaries had been removed, in the remaining four they were undoubtedly removed.

Dr. A. Meyer doubted whether it is wise to say that only congenital conditions predispose to the psychoses since it is probable that individuals with a fair start in life can undergo constitutional changes which will predispose to a mental breakdown. As a rule, the nature of the psychoses correspond to the constitutional make up of the individual.

Dr. M. C. Ashley thought that it is impossible to state definitely that the psychoses in any given case is the result of an operation. He has seen a number of instances of insanity which were attributed to operations on the reproductive organs, and he has also seen many operations performed that were not followed by a psychosis. On the other hand, profound mental shock has been attributed as a cause of psychosis. Why then, says Ashley, should not all patients sustaining similar shocks and patients operated on, develop a psychosis unless there is some inherent weakness or predisposition to insanity in those who do become insane?

Dr. L. P. Clark thought that the occurrences of insanity after operation indicates the existence of a primary constitutional defect, and that the exhaustion, fatigue, and worry previous to the operation can not be regarded in any other light than as exciting factors of insanity.

Dr. C. F. MacDonald coincided with the position taken by Dr. Hammond with reference to the etiologic importance of heredity in these cases. He thinks that it is rare, indeed, that a surgical operation of so serious a nature as oophorectomy causes insanity, except in individuals who have an unstable mental and nervous organization, whether inherited or acquired. Only in exceptional cases does insanity follow surgical operations or severe injury, even injuries of the head. Physicians are too much in the habit of seeking for some incident in the life of the individual which may be assigned as the cause of the mental disorder. MacDonald says that he always looks for predisposing and not exciting causes. Alcohol, for example, rarely causes insanity, except in persons who are predisposed thereto. There must be a predisposition to the disease before the so called exciting causes can become operative. The only way in which exciting causes can become operative is by under-

mining the general health and thus bringing about a condition of malnutrition of the brain which predisposes the individual to a true psychosis.

Dr. W. Hirsch does not think that the ovaries have any physiologic function, except the sexual function, hence removal of the ovaries can not produce insanity any more than any other operation can. Of course, the shock following oophorectomy may be much greater than that following other operations, but the psychosis following it holds that traumatic psychosis is a clinical entity, one which can be diagnosed readily. He agreed with the previous speakers that a perfectly normal brain can not acquire psychosis after any operation, unless it is an organic trauma to the brain, or that there exists a previous disposition to psychosis. He did not agree with Dr. Hammond that a normal man can ever become a paranoiac. The mind of a paranoiac never was a normal one, even if the paranoia did not manifest itself in early life.

Dr. E. A. MacDonald is convinced that operations on the uterus or ovaries have very little specific importance in the production of insanity. He has seen a few cases of postoperative insanity, but in these cases the insanity was due to the shock incident to the operation.

Dr. A. M. Hamilton agreed with the essayist and the previous speakers. He thinks that the profession has a duty to perform, that of educating or at least cautioning those members of the profession who not only wrongly associate neurosis and actual organic diseases, but psychosis as well, with various bodily ailments and defects.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Treatment of Eczema

A correspondent writes that he has a patient, otherwise healthy, who is afflicted with eczema, but he does not state the variety.

INTERNAL MEDICATION

In acute eczema—blue mass or compound cathartic pill, followed next morning by a saline laxative. Natural mineral waters are useful, such as the Hathorn, Carlsbad, Hunyadi Janos or Friedrichshall. When both iron and the sulphate of magnesium are indicated the following may be used:

R Magnesium sulph	5ii	60
Acid sulphur dil	3ii	8
Ferr sulph	℥ss	65
Sodii chlor	3i	4
Tinct card comp, aa	℥ss	250
Aquæ dest		

Filtra Sig. A tablespoonful before breakfast in a tumblerful of cool or hot water.

In case of renal derangement diuretics are indicated, and in gouty cases, colchicum and Vichy water.

When both diuretics and alkalies are indicated the following may be used:

R Magnesium sulph	5ss	15
Magnesium carb	3i	4
Tinct colchu	3ss	2
Olei menth pip	m ii	12
Aquæ dest	5vi	180

LOCAL MEDICATION

The following is a useful lotion:

R Acid carbolic	℥ii	2/65
Zinci oxid	3i	4
Glycerini	3ii	8
Aquæ calcis q s ad	5viii	240

In this formula, when carbolic acid does not act favorably, dilute hydrocyanic acid may be substituted. Tragacanth mucilage may be used instead of glycerin, or both may be omitted and half the amount of lime water may be replaced by an equal quantity of elder-flower water.

R	Acidi hydrocyanici dil	3ss	ii	2	8
	Zinci oxid	3i		4	
	Calamin, aa				
	Aque calcs	3iv		120	
	Aque sambuci, aa				
Or					
R	Acidi carbolici	3ss	ii	2	8
	Bismuthi subnit	3i		4	
	Pulv tragacanth	gr	xl	2	6
	Aque calcs	3viii		240	

WEeping ECZEMA

In the so called weeping eczema the following is useful

R	Tinct opii	3ss	15
	Liquoris plumbi subacetatis dil q s ad 3viii		240

To this may be added glycerin, boric acid to saturation, zinc oxid or other powder to be left on the skin as a deposit, or from half to one ounce of the tincture of camphor, if this drug is well borne and if a decided antipyretic effect is desired. A saturated solution of boric acid to which has been added 2 per cent or more of glycerin or tragacanth mucilage is an excellent application in moist eczema and in the suppurating forms.

Hyde states that for the subacute and indolent stages mildly stimulating and stronger antipyretic lotions containing tar, carbolic acid, menthol, camphor, chloral and alcohol may be used, but that they should be tried cautiously and diluted at first. They generally give best results when applied for a few minutes at a time, several times a day.

In some acute inflammatory cases, Lassar's paste gives good results.

R	Zinci oxid	3ii	8
	Ampli, aa		
	Petrolati	3iv	15

To this is generally added from 3 to 10 grains of salicylic acid.

Another paste which gives good results is Dühring's paste.

R	Zinci carb	3i	4
	Acidi salicylici	gr	x
	Petrolati	3ii	8
	Cerat plumbi subacetat	3vi	24

Hyde and Montgomery recommend the following

R	Bismuthi oxid	3ss	2
	Vaselin		
	Olei olivæ, aa	3ss	15
	Cere alb	3iss	6
	Olei rosæ q s		

Stelwagon states that diachylon ointment, if well and freshly prepared, is soothing and mildly astringent, but that it is difficult to obtain a good preparation. If this ointment is not fresh, irritation often follows its application.

Unsalted Diet in Scarlet Fever

Dufour, Pater and a number of other physicians have been studying the effect of restriction of salt in the diet of scarlet fever patients. They find that it is well tolerated and protects against kidney trouble as well as a strict milk diet. If there is a tendency to albuminuria at first, it soon subsides. The children all increased in weight on the mixed unsalted diet as soon as the fever declined. The general impression was that the course of the disease was shortened and the patients rendered more resistant to intercurrent infections and complications. Guinon, in a discussion of the subject at the Paris Société des Hôp, February 8, stated that he made a practice of putting scarlet fever children on raw meat, as well as those with slow healing ulcerations, suppurations and necrosis. The raw meat seemed to exert a remarkably favorable action from the first, especially in the ulcerations that follow the phlegmons of scarlet fever or the necrosis of the palate. The so called "unsalted diet" is not altogether without salt. A small carefully measured amount is allowed and its elimination surprised.

Quinin and Arsenic in Syphilis

Assuming that syphilis is a disease caused by a protozoön, Max Kahane of Vienna (*Wiener klin Wochsft*), suggests its treatment with the three most effective agents against protozoa: quinin, methylene blue and arsenic acid in suitable doses. The treatment, he suggests, would be appli-

cable only to the primary and secondary forms as active living spirochetes have not yet been demonstrated in tertiary syphilis.

Treatment of Snake Bites

A correspondent in the *Münch med Wochsft* for January 2, writing from Vienna, describes the treatment of snake bites generally practiced in Austria. Elastic constriction is applied to the limb above the bite, and from 20 to 30 c.c. of a solution of chlorinated lime is injected into and around the wound. After it has been injected the ligature is removed and stimulants given, especially alcohol. One part of chlorinated lime is dissolved in twelve parts of water for the mother solution, which is diluted with nine parts water for the injections. The writer states that this treatment has repeatedly established its efficacy, especially for viper bites, although antivenin is always used when procurable.

The Indications for the Use of Digitalis.

Eichorst, in an abstract in *American Medicine*, states that the weakness of the cardiac muscle from any cause, whether due to disease of the cardiac valves, of the myocardium itself, chronic diseases of the respiratory organs, atrophic kidneys, acute infectious diseases or poisons, is the chief indication for the employment of digitalis. He disapproves, however, of the use of digitalis in fibrinous pneumonia and in uremia, except in that it improves the cardiac muscle and increases the excretion of urine. He prefers the powdered digitalis to all other preparations. He regards the cumulative action of digitalis as in a large part imaginary, although anorexia, nausea and vomiting may occasionally occur. In many cases before prescribing digitalis he sends the patient to bed and orders a milk diet, and within three days begins the use of digitalis. If for any reason the pulse rate falls below 60, he suspends the digitalis at once. The delirium which is occasionally noted after the administration of digitalis when given in edematous conditions he regards as due to autointoxication, the result of too rapid absorption of the liquid.

Silver Nitrate for Chronic X-Ray Ulcers

Mr W C Fuchs, a former x-ray operator, who has suffered for years with chronic ulcers caused by exposure to the x-ray in his business, suggests that we mention a few points in his experience for the benefit of others who may have failed to find relief. All other methods of which he could in any way learn were tried without more than temporary and partial benefit. Dr H Roberts, St Louis, suggested to Mr Fuchs the use of silver nitrate, in full strength, one drop being applied and allowed to spread over such an area as it would cover. Dr Roberts had used this on his own hands with success, and Mr Fuchs found it efficacious. Ulcers which had persisted for six years have healed and others are in process of healing. The skin is becoming normal. Mr Fuchs does not know of this remedy having been tried by others. We believe that some others have tried it without such pronounced success. It may not be as efficacious for every one.

Treatment of Syphilis by Hypodermic Medication

The treatment of syphilis by hypodermic medication, according to Campbell Williams, in the *Clinical Journal* (London), may be divided into the subcutaneous, intramuscular and intravenous methods. The advantages claimed for this method of treatment are, first, accuracy and regulation of the dose of mercury administered, second, rapidity of action, third, certainty of absorption, fourth, non impairment of the digestive functions, fifth, the comparative freedom from the grosser forms of stomatitis, sixth, the mitigation of intestinal disturbances. According to some authorities the use of insoluble mercurial preparations has in some cases been followed within a few moments of the operation by pulmonary infarction. The explanation for this occurrence is probably made on the basis that the injection was intravenous rather than intramuscular, owing to the fact that the point of the needle penetrated within the vessel itself. Williams guards against this occurrence by taking the precaution of either plunging the needle in separately or detaching the syringe from the needle after it has been inserted in order to see whether or not any venous blood escapes through the needle before injecting the insoluble salt.

This procedure is after the experience of Gottheil, of New York

According to the recorded experience of Lambkin, after the injections of 53,000 doses of metallic mercury suspended in the combined equal volume of lanolin and liquid paraffin no untoward results have followed

Calomel is sometimes used hypodermically in the treatment of syphilis, although records vary to a great extent as to its usefulness. Some state that the effects of this preparation pass off quickly and that relapses are common after its use. The drawbacks to its employment, as stated by Williams, are the presence of pain after the injection, abscesses which may occur in about 1 per cent of the cases, regardless of extreme precaution with the injection, swelling and induration of the parts in a day or two after the injection, nodes, varying in size from an olive to that of an orange. These nodes disappear, however in a few weeks, as a rule but some persist for six or even twelve months. Whatever may be the preparation used hypodermically before starting on this method of treatment one should always ascertain whether or not his patient is a "bleeder," as a hemorrhagic diathesis is an absolute contraindication to mercurial injections, either owing to the formation of local hematoma or to the setting up of hemorrhage from the urinary tract. The state of the kidneys must be looked into, and if there is any evidence of the lack of proper elimination unusual care must be exercised in the administration of mercury in whatever form. This is especially the case when the mercurial preparation is introduced, either intramuscularly or intravenously, since the renal apparatus is the principal channel by which the mercury thus introduced is carried off. Consequently Bright's disease contraindicates the use of mercurial injection. The same rule holds good in the treatment of diabetic patients. The presence of tuberculosis is also a contraindication. The mouths of all patients should be carefully watched as soon as the treatment is begun, special care being given to the gums, as mercury frequently is blamed for conditions in the mouth for which it is not responsible.

INTRAMUSCULAR INJECTIONS

According to this author, the intramuscular injection has supplanted the subcutaneous method. The most convenient location for the administration of the mercury is the gluteal region, using the right and left side alternately. The best location for the puncture should be above the level of the great trochanter, which is supposed to be the region of least sensation. The skin should be properly cleansed by antiseptic measures before the needle is introduced, but it should not be irritated more than necessary. The needle, of course, should be thoroughly sterilized immediately prior to its introduction by being held for a few seconds in the flame of a spirit lamp. After it has cooled it may be plunged into the muscle tissues at right angles until the proper depth has been reached. This depth, of course, varies with the amount of subcutaneous fat present, usually from three quarters to one inch below the surface of the skin. The precautions above stated should be observed in the injection of the emulsions of the insoluble salts to see that the point of the needle is not engaged in the lumen of a vein. This is not so necessary when the soluble solutions are employed, since they may be injected intravenously without the danger of causing pulmonary intarction. (It might be added that it is absolutely necessary that air be entirely excluded from the barrel of the syringe before introducing the injection.)

After the needle is withdrawn the site of the injection should be gently pressed by the finger for a few moments and light massage given in order to diffuse the fluid in the tissues. The puncture wound is then sealed by means of antiseptic wool saturated in collodion.

The author enumerates quite a number of the preparations of mercury, the most important of which are as follows. The soluble preparations are hydrargyri lactas, hydrargyri succinate and of the insoluble mercury which should be administered in liquid paraffin, oleum olivæ or lanolin and liquid petrolati, the following are the most important. Metallic mercury, hydrargyri oxydum flavum, hydrargyri salicylate, hydrargyri tannate, hydrargyri benzoate, hydrargyri subchloridum. The lactate of mercury which is soluble in about 1 in 7 parts of water is one of the least irritating of all the mercurial

salts. It is recommended that it be instilled as an intramuscular injection in doses of from gr 1/4 (015) to gr 1/2 (03). The author, however, speaks of one of its drawbacks, which is the rapidity with which it is eliminated from the body, consequently the injections must be frequently repeated. On the other hand it is to be recommended strongly on account of its safety and comparatively painless after effects.

Metallic mercury is administered in the form of gray oil. The formula for making up this combination is as follows:

R	Hydrargyri (metallic)	5ss	2	12
	Unguenti hydrargyri	gr 11		
	Liquidi petrolati	5i	4	

M Sig From 1 to 2 minims at a dose

Lambkin recommends the following combination

R	Hydrargyri (metallic)	gr xv	1	10
	Liquidi petrolati (carbolyzed 2 p c)	3iiss		

M Sig Ten minims injected hypodermically once a week

The yellow oxid of mercury may be used suspended in oil, but the injections with this preparation are painful and no special advantage can be claimed for it. Gottheil recommends the salicylate of mercury as the best preparation in the treatment of syphilis hypodermically. He recommends the following combination:

R	Hydrargyri salicylatis	gr xv	1	10
	Liquidi petrolati	5iiss		

M Sig From 3 to 10 drops injected once a week or once every two weeks

Gottheil claims that this is a non irritant preparation and that only slight stiffness is noted on the day following the injection. He also claims that it is as effective as any of the insoluble salts of mercury. The benzoate of mercury is insoluble in cold water and is, therefore, classified as an insoluble salt. It may be given, according to some authorities in the following combination:

R	Hydrargyri benzoatis	gr v	1	30
	Sodii chloridi, aa			
	Aquæ dest	5i	30	

M by dissolving with the aid of heat and then filter. Sig Ten minims once or twice a week.

In the use of calomel it is said that great pain not infrequently follows the injection. It is regarded by Williams, however, as the remedy *par excellence* for endarteritis and its sequelæ. It is given best by suspending it in sterilized olive oil, combined as follows:

R	Hydrargyri chloridi mitis	gr v	1	30
	Olei olivæ	5iiss	6	

M Sig From 10 to 15 minims introduced hypodermically

The succinimid of mercury may be given as follows:

R	Hydrarg succin	3ss	2	65
	Cocainæ hydrochlor	gr v		
	Aquæ dest	5iiss	45	

M Sig Fifteen drops hypodermically twice a week

Medicolegal

Presumption That Credit Was Given to Husband

The Supreme Court of Alabama says that the evidence in Montgomery Street Railway Co vs Smith, a personal injury case brought by the latter party, a married woman, did not show whether the credit for the doctor's bill or medical attendance was given to the husband or to the wife, and in the absence of proof the presumption was that the credit was given to the husband, so that the wife would not be entitled to recover anything therefor.

Hysterical Condition of Witness

The Supreme Court of Arkansas says that in the case of Buckner vs State, a prosecution of the first named party for seduction, the defendant advanced as grounds for a continuance that the prosecuting witness (the seduced female) "had long been subject to some nervous malady causing hysterics or mental delirium, and had recently suffered an attack from same, and was not, at the time of calling of this case for trial, recovered from such attack, that the importance of the case would necessitate her remaining on the witness stand an indefinitely long time, and undergo vigorous cross examination,

which would excite the sympathy of the jurors for her and greatly prejudice the defendant's defense, that in fairness to him he ought not to be compelled to cross examine the prosecutrix in her present physical condition." But, the court says, thus stated no grounds for continuance of the case. The court could not assume in advance that the woman's physical condition nor the character of the cross examination of the defendant's counsel would be such as to excite the sympathy of the jury and to prejudice them against him. If so the fear of exciting sympathy for the wronged would forbid the courts from bringing to speedy trial persons accused of most any crime. Moreover, the determination of that question fell fairly within the sound discretion of the trial court, and as no abuse of it appeared the Supreme Court would not disturb its exercise.

Some Points from an Extended Litigation for Fees

The Supreme Court of Missouri, Division No. 2, says, in the case of *Logan vs Field*, that suit was instituted before a justice of the peace March 24, 1896, on an account for \$160 for services rendered the defendant by the plaintiff, as a physician. The plaintiff recovered, before the justice, judgment for \$160, the full amount of his claim. The defendant then took the case, by appeal, to the Circuit Court of Jackson County, where, on trial, *de novo* (anew) before the court and jury, the plaintiff again recovered judgment for \$160. From this judgment the defendant appealed to the Kansas City Court of Appeals where the judgment was reversed and the cause remanded for further trial. Thereafter, on Nov. 17, 1901, the case was again tried in said Circuit Court and the plaintiff recovered a verdict and judgment for \$50. After unavailing motions for a new trial and an arrest of judgment, the plaintiff appealed from this judgment to the Kansas City Court of Appeals, and thereafter, on his motion, that court transferred the case to this court, where the \$50 judgment is affirmed.

As to the facts in the case. The Supreme Court says that the plaintiff was a practicing physician, making a specialty of diseases of the nose, throat and ear. He had treated the defendant in the year 1890, and his bill for that service was paid. In October, 1892 the defendant applied again for treatment. The trouble he was suffering from in 1890 was different from that of 1892. In the first instance he had an enlargement or thickening of the mucous membrane or lining of the nasal cavity of which the plaintiff cured him. In 1892 the plaintiff found that he was suffering from inflammation of the turbinate bone, together with inflammation of the frontal sinus. The plaintiff, hoping to relieve the inflammation, and successfully treat the disease without an operation, gave him the treatment sued for telling him that he could not state whether a cure would be worked, and declining to guaranty that such cure could be effected.

It appeared from the plaintiff's testimony that the defendant was benefited, that the case grew better, that the treatment administered to relieve the congestion in the canal leading to the sinus was successful but that, from time to time, the defendant would catch cold and violently blow his nose, thus keeping up the inflammation which tended to close the connection between the sinus and the nasal cavity. The propriety and correctness of the treatment administered by the plaintiff was supported by several physicians and the defendant's expert testified to the effect that the plaintiff had been pursuing correct practice in endeavoring to work a cure without performing an operation. Nor was there any contention on the part of the defendant that he had been in any way injured by the plaintiff's treatment though he did testify that he did not think he was benefited thereby.

The result of the litigation is as above stated. The Supreme Court thinks that on the trial first appealed from the case was very fairly presented to the jury by the instructions taken together. Among the instructions given on behalf of the plaintiff one was that if the jury found and believed from the evidence that the plaintiff rendered the services sued for to the defendant and at his request and that no price was fixed or agreed on then the law implied a promise from the defendant to pay the plaintiff for such services what the same were reasonably worth if anything and that this was true with

out regard to whether the treatment was beneficial to the defendant. Other instructions qualified the words "reasonably worth" by adding "according to the usual charges of the medical profession in this vicinity." Furthermore, the jury was instructed that, if the plaintiff knew that the disease from which the defendant was suffering was in the frontal sinus, and the plaintiff had reasonable cause to believe in the exercise of ordinary care and skill that the same would yield to treatment without an operation, then he had the right to treat the defendant for such trouble until such time as he became reasonably certain it was necessary to perform such operation, and he was entitled to recover for such services what the same were reasonably worth, if anything, without regard to whether the defendant was benefited by such treatment or not.

On the other hand, the jury was instructed, on behalf of the defendant, among other things, that the defendant had the right to expect good faith from the plaintiff, and to rely on the supposed superior knowledge of the plaintiff to discover, determine and advise what course should be pursued in his case. If the treatment sued for was worthless to the defendant, and if the plaintiff then knew, or ought as a man of his profession to have known, of the uncertainty or probable uncertainty of a cure of the defendant from the treatment administered, and the defendant went for and received such treatment, and was encouraged by the plaintiff to receive the same, or because the plaintiff failed to inform him of the uncertainty or probable uncertainty of a cure from such treatment, the verdict should be for the defendant. The plaintiff had no right even if in the best of faith, to render service of no substantial benefit to the defendant and charge therefor, if he himself had doubt, or as a reasonably prudent and competent physician ought to have had doubt in his mind, of such service being a successful treatment of the defendant's trouble, unless he fully informed the defendant of such doubt, and the defendant, with such information of the uncertainty of the success of the treatment, afterward went for and received the same. If the trouble with which the defendant was suffering, and for which he sought the plaintiff's professional aid, was in the frontal sinus over the defendant's right eye, and an operation was then necessary to relieve the trouble of the defendant, and the plaintiff knew this, or could have known it by the exercise of reasonable skill and effort, then his treatment of the plaintiff was unskillful and improper, and he ought not to recover any amount in this action. The plaintiff could not recover for the service rendered in this case merely because he may have performed such service with the permission or even at the request of the defendant and avoided giving the defendant an express guaranty of a cure.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia

February 2,

- 1 *Clinical Observations in Exophthalmic Goiter. G. Dock. Ann Arbor, Mich.
- 2 Neurasthenia Treated by Two General Physicians, One Homoeopathist, One Quack, One Osteopath, One Pregnant, Three Ophthalmic Surgeons, Two Gynecologists, One Diagnostician, One Neurologist, One Resident Sanitarium Physician, and One Refractionist. G. M. Gould. Philadelphia.
- 3 *Uses and Abuses of the Free Dispensary. R. O. Kerlin. Philadelphia.
- 4 Relation of Acid Fermentation in the Stomach to Neurasthenia. J. W. Robinson. Bozeman, Mont.
- 5 *Bacillus Chlorhidricus. I. Paller. New York.
- 6 Sanatorium Treatment of Tuberculosis. G. B. Knib. Erie, Pa.

1 Exophthalmic Goiter.—Dock reports the results of his observations of 22 cases, 20 women and 3 men. The predisposing causes could rarely be discovered. In 12 of the patients previous diseases or nervous shock were noted a short time before the characteristic symptoms. In these cases goiter was the first symptom, but in 12 others a goiter was observed from three to thirty-seven years before the other symptoms came on. The thyroid gland was enlarged in all cases. In 26 a systolic murmur was audible over the thyroid. Tachycar-

dia was present in all but two patients, and in one of these it had been present before the observations began. Observations on the blood pressure showed striking differences. In some the pressure was high, up to 180 mm. The symptoms were absent in only three cases. Emaciation was a marked and striking symptom, in two cases amounting to almost or quite half the body weight. Diminution of hydrochloric acid in the stomach was observed in a number of cases, but hypermotility was often associated with this. Two of the patients died, one from complicating disease, the other with acute symptoms. Of the other cases, a number had chronic courses up to fifteen years. Emphasis is laid on the importance of the early diagnosis. Regarding treatment, rest is considered most important, with symptomatic treatment. Experience with some of the organic preparations and roentgen rays are mentioned. Surgical treatment is recommended, with certain limitations.

3 Uses and Abuses of the Free Dispensary—Kevin believes that one reason for the abuse of the free dispensary lies in the fact that it is to the interest of those connected with the institution to have a large service, also that while dispensaries continue to afford practice, experience, and reputation to young and old doctors and "something for nothing" to the general public, the number of patients will not diminish and physicians will always be applicants for vacancies. He divides those who patronize free dispensaries into four principal classes. 1, Those able but not willing to pay, 2, those who, not knowing a specialist, want to find one without being compelled to pay a specialist's fee, 3, poor, suffering unfortunates, who, either by drink, misfortune, ignorance or poverty, are forced to avail themselves of a dispensary's charity, and 4, hypochondriacs, who find, or try to find, relief from their fancied ailments in the different departments of a hospital dispensary.

5 Bacillus Chlorhydrici—Under this name Palier describes a microbe which he isolated from the human stomach and cultivated. It is a small, slender, rod-shaped bacillus having slight motility. Its isolation is very difficult. It is Gram negative and aerobic. Spores could not be detected. It is found in hyperchlorhydria and chlorhydria. Palier says that ordinarily this is not a pathogenic microbe, but a physiologic one, aiding digestion. Under adverse circumstances, however, the germ, in conjunction with yeast, may be an important factor in the causation of simple ulcer of the stomach.

Medical Record, New York

February 24

- 7 *Problems in the Treatment of Pneumonia E. Le Fevre New York
- 8 *Bier Treatment by Hyperemia M. Breuer Buffalo N. Y.
- 9 *Chronic and Periodic Vomiting D. Roberts Brooklyn
- 10 *Etiology of Eczema T. C. McGuire Washington, D. C.
- 11 A Few Suggestions in Reference to Consumption L. Larian New York

7 Problems in Treatment of Pneumonia—Le Fevre declares that from the very beginning of the attack the physician's efforts should be directed toward controlling the toxemia and its effect. Care should be taken, however, that the treatment does not exhaust the patient. Unless contraindicated, Le Fevre uses saline cathartics freely during the early days of the disease. If the toxemia is exaggerated, the same external methods for causing sweating should be employed as those used in the treatment of acute uremia. He warns against the use of pilocarpin, but advises the use of hot drinks, liquor ammoniacalis, and citrate of potassium. As there is generally kidney irritation in this disease, abundance of water is indicated. If there is nausea and vomiting so that the administration of water by the mouth is restricted, enemas of normal saline solution should be substituted. Venesection is indicated in those cases in which the patient seems to be overstimulated by the toxemia. Fresh air is necessary, but cold is not an essential element of the open air treatment. Le Fevre advises keeping the room at a temperature of 65 F. In cases in which there is pain, opium or one of its derivatives, as a rule, has the best effect. He condemns the tendency to resort to nitroglycerin in cases in which cardiac failure is suspected. He advises two classes of stimulants to be used in cases of loss of vasomotor control. 1, Those acting on the medullary centers—strychnin,

caffeine, atropin and cocaine, 2, those acting directly on the muscular tissue of the arterial system—digitalis, ergot and suprarenal extract. The action on the blood vessels of suprarenal extract of adrenalin chlorid is very rapid and energetic, but its effects are temporary. It should be used in the treatment of sudden vascular collapse. Le Fevre says that no case of pneumonia should be given up as lost until death actually takes place.

8 Bier Treatment by Hyperemia—Breuer reviews a number of tuberculous cases treated by this method in Bier's clinic during sixteen months. In a long series of not selected cases the wrist showed a cure in 88 per cent, the elbow in 72 per cent, and the foot in 61.5 per cent. Breuer also discusses the application of this treatment to acute inflammatory conditions, such as tonsillitis, otitis media and tuberculous orchitis. Other affections suitable for treatment by hyperemia are septic wounds, fractures, arthritis, lymphangitis, hemarthrosis, neuralgia, neuritis and varicose veins.

9 Chronic and Periodic Vomiting—Roberts discusses the difficulties that may attend the diagnosis of causation in chronic and periodic vomiting. He says that careful search of the entire body and all its functions may be necessary. He summarizes his deductions as follows:

- 1 Vomiting of a chronic type following a gradually developed epigastric pain from one half to three hours after the ingestion of food is attributable to peptic ulcer gastric or duodenal.
- 2 Chronic vomiting that occurs from ten to fifteen minutes after food ingestion is attributable to stenosis of the cardia, nervous abnormality, cerebral lesion (occasional rather than chronic), or to protracted acute gastritis.
- 3 Copious vomiting ten or more hours after food ingestion indicates a muscular insufficiency. Frequent repetition indicates a permanent lesion in the nature of a mechanical interference with the exit of food.
- 4 Vomiting in the night is particularly liable to occur in cholelithiasis, periodic hypersecretion, muscular insufficiency, and nervous abnormality.
- 5 Vomiting attempts when the stomach is empty indicate a cause other than a gastric lesion either a reflex cause, a toxemia, a cerebral lesion or a nervous abnormality.
- 6 Morning nausea and retching indicate either a beginning of pregnancy, alcoholism, pharyngitis, nephritis or a nervous abnormality.
- 7 Periodic vomiting of clear gastric juice of normal or super normal acidity in any considerable amounts indicates a secretory neurosis or an ulcerative lesion.
- 8 Vomiting as a sequel of headache accompanied by severe nausea but no gastric or abdominal symptoms characterizes attacks of migraine. In a majority of cases eyestrain is the underlying cause.
- 9 Attacks of vomiting of sudden onset, with tinnitus, deafness and vertigo are attributable to disturbances of pressure in the internal or middle ear.
- 10 Periodic attacks of vomiting of sudden onset associated with more or less severe gastric pain and nausea, retraction of the abdomen, obstinate constipation during but not preceding the attack, and freedom from abdominal tenderness are suggestive of the spinal crises, idiopathic nervous vomiting and lead poisoning.
- 11 Periodic attacks of vomiting after abdominal colic and constipation with localized or general tympany are suggestive of chronic intestinal stenosis.

10 Etiology of Eczema—McGuire does not believe that gout, rheumatism and many other of the diseases referred to as factors predisposing to eczema have anything whatever to do either in causing the disease or in influencing it in any way after it has been established, only so far as any "run down condition" of the general system makes the skin less resistant to irritation. Of course, some persons have skin that is susceptible to inflammation, which varies according to the nature of the irritant. McGuire believes that some time in the near future the term eczema will be limited to that form of cutaneous disease that is caused by some specific parasite acting on a vulnerable skin. He cites one case in which the tendency to the disease appeared to be transmitted to the offspring.

New York Medical Journal

February 24

- 12 Rheumatic Fever (Acute Articular Rheumatism) J. V. Shoemaker Philadelphia
- 13 *Cholecystectomy J. F. Erdmann New York
- 14 Difficulties of Diagnosis and Operation in Diseases of the Biliary Tract W. P. Cair, Washington D. C.
- 15 Definition of Insanity W. A. White Washington D. C.
- 16 Medicine at Oxford 1905 C. N. B. Camac New York
- 17 Treatment of Joint Tuberculosis in the Open Air in a City Hospital R. A. Hibbs New York
- 18 Acute Intestinal Obstruction—Mention of Illustrative Cases E. W. Peterson New York
- 19 *Simultaneous Uterine and Extrauterine Pregnancy H. N. Vineberg New York
- 20 Prosthetic Albuminuria Not an Infrequent Cause of Error in the Diagnosis of the So called Orthostatic Postural Proteinuria and Cyclic Albuminuria T. G. Ballenger Atlanta Ga.

13 Cholecystectomy—Erdmann reports the results obtained in 27 cholecystectomies, complicated or not with other diseases and conditions, and draws attention to the fact that no waiting time for subsidence of infection, etc., was given any of these cases by doing a previous cholecystotomy, nor was local treatment advised. The worst cases of infection and most active invasions did fully as well, if not better, than those of lesser or practically no inflammatory activity.

Twenty two of the 27 patients were females, the youngest being 27, the eldest 66. Four of the entire number were over 50 years of age. One was a male, aged 27. One patient gave a history of attacks from her tenth year, and one from her twelfth year. Five had histories of previous typhoid, about 20 per cent of this series. In 10 no history of typhoid was obtainable, and 9 gave a negative history of typhoid. Two deaths occurred in this series, both in non suppurative, but not in uncomplicated cases. The first patient, a woman, aged 40, a long suffering patient whose condition was far below par, died from exhaustion in eight days. In this case it was necessary to do a choledochotomy for numerous stones in the common and hepatic ducts. The second patient was a male, aged 27, who vomited black matter after the operation from the moment he was placed on the cart in the operating room. He had 33 stones in a distended and elongated bladder, complicated with a diseased appendix containing 11 concretions. Typhoid bacilli were found in the bile.

Two pregnancies occurred, one five months, miscarriage in twelve hours after the operation. This woman had a temperature of from 99.5 F to 104 F for over a week previous to the operation. The other, who was in the seventh week of pregnancy, submitted to an operation for cholelithiasis and appendectomy without aborting. The appendix was removed in 16 out of the 27 cases, in several instances being markedly inflamed. Eight patients had gangrene of one or more coats of the bladder. One was doubly perforated, contained two stones and a large abscess well walled off. In 5 cases the common history of jaundice was obtained in 12 cases, the jaundice passed through the common duct before the operation in some of them, while in 2 or 3 pressure of exudate and distended bladder could be ascribed as the factor productive of jaundice. Twenty two operations were for acute inflammatory conditions, all the patients recovered. One operation was for hydrops due to a large stone in the cystic duct, with another free in the bladder, one was done for a primary typhoidal perforation in the beginning of the sixth week of the disease, or rather the first week of convalescence. Erdmann describes his method of operating in detail.

19 Simultaneous Uterine and Extrauterine Pregnancy—Vineberg reports two cases, both ending in recovery. He says that in every case of uterine miscarriage that shows abnormal symptoms, after the uterus has been emptied the probability of an associated extrauterine pregnancy should be considered, and likewise after an operation in a case of extrauterine pregnancy should there be an undue persistence of uterine bleeding one ought to think of the probability of an associated uterine pregnancy that has been overlooked.

Boston Medical and Surgical Journal.
February 22.

- 21 John Hunter. J. G. Mumford Boston
- 22 Stenosis of the Pylorus in Infancy. C. L. Scudder Boston
- 23 Home Sanatorium Treatment of Consumption. J. H. Pratt Boston
- 24 Cold Fresh Air Treatment of Pneumonia. W. P. Northrup New York
- 25 New Gouge for Submucous Operations in the Nose. R. A. Coffin Boston

25 New Gouge for Submucous Operations in the Nose.—Coffin has found his instrument particularly useful in removing cartilaginous and bone thickenings of the septum. The length of the instrument is five inches. (The original article must be referred to for a full description of the instrument.) The advantages claimed for this instrument are (1) The rapidity with which thickenings under the mucous membrane can be removed, (2) safety, (3) rapid healing with little or no crusting, (4) ease with which the broad flat thickenings which can not be engaged with the saw can be removed.

Lancet-Clinic, Cincinnati, Ohio
February 24

- 26 Diseases Diagnosis and Surgical Treatment of the Night
- 27 Upper Abdominal Cavity. B. M. Ricketts, Cincinnati
- 28 Tuberculosis. F. C. Curry. Milford Ohio
- 29 When Prostatectomy Instead of Prostatectomy Is Indicated. C. E. Barnett, Ft. Wayne Ind
- 30 Migraine—Hemicrania—Sick Headache. E. L. Mather Akron
- President's Address Delivered Before the Ohio Valley Medical Association, at Henderson, Ky. J. W. Stone Henderson

St. Louis Medical Review
February 24

- 31 Silver Therapy. S. S. Cohen Philadelphia
- 32 Rapid Cure of Eczema of Face and Head. G. Richter St. Louis
- 33 Further Examples of Corrupt Medical Nomenclature. A. Rose New York

Surgery, Gynecology and Obstetrics, Chicago
January

- 34 Common-duct Cholelithiasis Its Symptoms Complications and Treatment. A. W. M. Robson London England
- 35 Lexer's Operation for Removing the Gasserian Ganglion. W. Van Hook Chicago
- 36 Acute Postoperative Dilatation of the Stomach. A. E. Hallstead Chicago
- 37 Treatment of Placenta Prævia. E. P. Davis Philadelphia
- 38 Indications for Forceps at Cook County Hospital, Chicago
- 39 Diagnosis of Surgical Lesions of the Kidney. C. D. Lockwood, Los Angeles
- 40 A Third Ovary. W. P. Manton Detroit
- 41 Tumors of the Parotid in Children. C. G. Grulee Chicago
- 42 *Tuberculosis of the Cervical Lymph Nodes. D. N. Eisen-drath, Chicago
- 43 *Calcification in Gynecology. F. T. Andrews Chicago
- 44 *Modification of Kronlein's Trigeminal Operation. E. Lexer
- 45 Joseph Bacons Dumb-bell Intestinal Anastomosis. B. Robin-son Chicago
- 46 Progress of Liver Hemostasis. W. E. Schroeder Chicago
- 47 Treatment of Fractures of the Femur at the Cook County Hospital. C. Davison Chicago
- 48 *Retroperitoneal Hernia. L. L. McArthur Chicago
- 49 Cesarean Section with Questionable Indication. P. Flindler Chicago
- 50 Technic of the Surgical Department of Cook County Hospital. C. P. Phenister Chicago
- 51 Obstetric Technic in the Cook County Hospital. H. F. Lewis Chicago
- 52 *Technic of the Longitudinal Wire Suture in the Closure of the Abdomen and in the Radical Operation for Hernia. M. L. Harris, Chicago
- 53 Technic of Removal of the Breast and Axillary Glands. J. B. Murphy Chicago
- 54 Technic of the Andrews Operation for Hernia. E. W. Andrews Chicago
- 55 *Technic of Closure of Wounds by Removable Continents. C. Davison Chicago

42 Tuberculosis of Cervical Lymphnodes—Eisendrath believes that sufficient attention has not been paid heretofore to the primary infection at a practice to have every patient examined if possible before operation by a specialist as to the existence of diseased faucial tonsils, complicated or not by the presence of adenoids. Practical experience has convinced Eisendrath that there are cases of tuberculous cervical lymphadenitis which run a very acute course, so that cessation occurs within two or three weeks after the onset of the disease. He thinks that the majority of these cases are the result of an influenza inflammation of the lymphnodes. He describes in detail the operative technic employed by him in these cases.

44 Modification of Kronlein's Trigeminal Operation.—In the method devised by Lexer, the cutaneous incision passes along the upper margin of the zygoma through the skin and temporal fascia. It begins anteriorly at the upper anterior zygomatic angle close to the posterior margin of the fronto-sphenoidal process, ending posteriorly immediately in front of the temporal artery. It is necessary to cut this. In order to cut the zygoma the posterior angle of the wound is pulled and a needle armed with a chain saw is passed around the zygomatic process of the temporal bone. The bone is sawed obliquely in a posterior and outward direction. Next a chisel—too wide—is applied to the upper margin of the zygoma, close to the base of the fronto-sphenoidal process, and the zygoma is severed with preservation of all soft parts—entirely subcutaneously—in a forward and downward direction. On retracting the mobilized zygoma inclusive of the margin of the wound downward, the temporal muscle is brought into view. The posterior margin of the muscle is detached bluntly from the bone and forcibly pulled forward by a blunt hook. In case of small facial bones or strongly developed muscle, nicking of the margin of the muscle is advisable. The retraction

tion of the muscle renders the infra temporal crest accessible (this is located with a blunt instrument (to avoid contact with the finger) and the periosteum is cut exactly on top of the crest. If by mistake the insertions of the pterygoid muscles are attacked the further course of the operation becomes a bloody and difficult one. A blunt hook about 2 cm in width is applied to the periosteal wound running at right angles to the infratemporal crest. Employing the hook as periosteal levator the periosteum and the pterygoid muscles are detached from the bone. This accomplished the detached muscles, with the zygoma are retracted downward and somewhat forward by the hook previously attached to the wound. This exposes at once the infratemporal fossa (zygomatic fossa), and in its posterior portion the foramen ovale with the third branch. It is not difficult to pull this forward with a small curved hook in order to grasp it by forceps for the purpose of evulsion. The foramen and the vicinity is closely scrutinized for any remaining branches.

If the nerve is grasped close to the foramen ovale, injury of the middle meningeal artery may be avoided. The artery is covered by the condylar process of the inferior maxilla, and is seen in anatomic specimens in looking downward and backward from the anterior portion of the wound. The incision serves likewise for removal of the second branch, if this becomes necessary. All that is necessary is to place the head in such a position that one can view the field from the posterior margin of the wound in a downward and forward direction. The nerve is located at the entrance of the sphenomaxillary fissure surrounded by loose adipose tissue. From this the nerve is picked up by a hook, separated from the fatty tissue by small sponges and tissue forceps. When absolutely certain that the entire nerve is separated, it is grasped and evulsed.

48 Retroperitoneal Hernia—McArthur cites a case of hernia in the fossa of Treitz consisting of an incarcerated loop of jejunum of which an accurate diagnosis could not be made before laparotomy, and then only after a most exhaustive search through the abdomen. After a careful study of the history of the case it appeared probable that there existed an acute intestinal obstruction, which might be due either to a mechanical or to an infective inflammatory cause. In favor of the mechanical nature of the obstruction was the somewhat gradual onset of the obstructive symptoms, without high fever, and with the appearance of blood and mucus in the stools, the blood count, while elevated, not being high enough to be convincing as to the presence of pus. Because of the tenderness over the whole abdomen, the sudden sharp exacerbation of the pains on the second day, and some rise in temperature, attention was directed to the appendix, but without other corroborative signs. Following the eviscerations in the endeavor to find the point of obstruction, almost the entire small intestine was removed from the abdomen before a small loop was found which led to the discovery of the cause of the trouble. The patient made an uneventful recovery.

52 Use of Longitudinal Wire Suture—The wire used by Harris is aluminum bronze, Nos 26 and 27 for ordinary purposes. The advantages of this wire over silver wire are its greater tensile strength, consequently a smaller wire can be used, and the fact that it does not kink so readily. The wire can be easily, quickly and certainly sterilized by simply placing it in boiling water with the instruments. In closing a median incision through the abdominal wall, three wire sutures are used, one closing the peritoneum, one in the sheath of the rectus muscle, and one in the skin.

The sutures are introduced in the following manner. A No 27 aluminum bronze wire is threaded directly in a nearly full curved round needle with a specially constructed eye for carrying wire so that it will not slip in the eye. The needle is made to enter the skin in the midline, 1 to 3 cm from the angle of the incision, and penetrates obliquely all the tissues down to the peritoneum, where it should appear at the angle of the peritoneal incision. The peritoneum is now taken up with the needle, parallel with and quite near to its edge, first on one side and then on the other, constantly in an advancing manner until the entire length of the incision has been traversed. The grasp of the needle should not be more than a

centimeter in length, and the point of entrance of one grasp should be opposite the point of exit of the last grasp. The suture is then brought obliquely to the surface about the same distance from the cutaneous angle as at its point of entrance.

The second suture, wire, No 26, enters in the midline, but a little nearer the angle of the incision. It penetrates as far as the sheath of the rectus muscle, where the edges of this fascia are taken up longitudinally in exactly the same manner as has just been described for the peritoneum. No sutures are applied to the recti muscles. At no point in the midline do the recti muscles lie in contact with one another, hence, in closing a median incision, it is unnecessary to suture together the recti muscles with the expectation of obtaining union between them. The dense, thick, conjoined fascia of the linea alba in the upper part of the abdomen or the firm anterior layer of the muscle sheath below Douglas' fold is the all important layer to be sutured. This is the layer in which the most perfect apposition, edge to edge, should be secured. The third suture is the usual subcutaneous or subcuticular suture. The wire enters and leaves at the angles of the incision running along in the corium, in and out, in the same manner as has been described for the other two. It does not appear on the skin at any point, except where it enters and leaves. After the wires are introduced they are drawn back and forth until they are perfectly straight and move easily through the tissues.

The wound may now be dressed in any manner one chooses. The method Harris uses is to seal the line of union with silver foil after the method of Halstead. On this he places a compress of a few layers of plain sterile gauze, over which are folded the ends of the wires, which should be left long. On these is placed another similar compress, followed by the usual dressing of plain sterile gauze and cotton. The wires are usually allowed to remain two weeks. To remove the wires they should be drawn back and forth gently until loosened in the tissue, then one at a time cut close to the skin and withdrawn. They are easily removed with scarcely any pain. Care should be taken not to break the wires by pulling suddenly before loosening them. In closing the muscle splitting incision in interval operations for appendicitis, one wire parallels the fibers of the internal oblique and transversalis, entering and leaving the skin some distance from the cutaneous incision and crossing it almost at right angles. Another wire parallels the fibers of the external oblique, and a third forms the subcuticular suture. The method which Harris uses in operating on inguinal hernia is described in detail.

55 Removable Continuous Sutures—All laparotomy wounds that are not drained, Davison closes by applying each layer with removable continuous longitudinal silkworm gut sutures. The suture in the fascia of the abdominal wall is fastened by terminal bowknots on the upper surface of the fascia, and the free ends of the suture are allowed to protrude from the wound. The bowknots are untied by traction on the exposed ends, and the suture removed at the completion of the process of healing. The technique of the suture of the wound in a median laparotomy is as follows. All hemorrhage in the wound in the abdominal wall is stopped by sponge pressure, by forepressure or by torsion, no catgut whatever is used. The edges of the peritoneum are caught with forceps, and are held up, away from the intestine, by an assistant, and the peritoneum is approximated by a continuous ringbone suture. The suture is lightly shirred to take up all the slack and the ends are left hanging out of the angles of the wound, temporarily held out of the way by snap forceps. In a median laparotomy the linea alba is the strong layer of the abdominal wall, and if this layer be fastened securely there can be no spreading of the wound. The edges must be accurately approximated. The fat must be cleaned away, so that there shall be no interposition of tissue between the edges of the fascia, as that would weaken the line of union and predispose to ventral hernia. For this suture a perfect strand of silkworm gut, soft and pliable from recent boiling, is selected. A small reverse bowknot is loosely tied 10 or 12 cm from the end of the strand. The edges of the fascia are caught with forceps and held by an assistant. The suture is introduced in a firm place in the fascia back from the angle of the wound and drawn up to the knot, and the fascia

is approximated by a continuous herring bone suture. The needle perforations in the fascia are placed about $\frac{1}{2}$ cm from the edge and 1 cm apart.

At the last stitch the suture is shirred up tightly, grasped by a smooth (serrations filed off) dissecting forceps at its exit from the fascia, held by an assistant, and another reverse suture knot tied below the point of the forceps. In tying the knot around the forceps the strand must pass under the forceps, and the loop must pass up from below, or no knot will result. The greatest care must be used not to crush or fray the silkworm gut with the forceps at the knot, for such a defect might cause the strand to break at that point at the time of removal. As the bowknot is intended only to form a body to obstruct the passage of the sutures through the fascia, it should be tied loosely, to make a larger obstruction, and to facilitate its untying at the time of removal. The ends of the tied suture must not be held out of the way by snap forceps, as their weight might untie the knots. The linea alba, being securely fastened, takes all the tension from the other layers, and the unfastened sutures in the other layers do not tend to pull loose.

The skin is closed by the Halstead subcutaneous stitch. If the patient is very fat, an extra running suture can be placed to approximate the fat and to avoid a dead space. If the wound is too long to close with a single silkworm gut strand, it is closed in sections, by repeating each suture. Lateral celiotomies are closed by suturing each layer of fascia with a tied strand of silkworm gut, not allowing muscle or fat to be included in the suture.

Texas State Journal of Medicine, Fort Worth

February

- 56 Sentiment and Science F E Daniel Austin
- 57 Local Anesthesia in Major Surgery W Kellner Galveston
- 58 Special Prophylaxis of Criminals and Degenerates J N Mendenhall Plano
- 59 *Multicystic Ovarian Tumor Weighing 328 Pounds A E Spohn Corpus Christi

59 Multicystic Ovarian Tumor—Spohn reports this case because of the enormous size of the tumor. The abdomen was so much enlarged that it came almost up to the patient's chin and extended midway between her feet and knees. When she lay on her side on a three quarter bed the abdomen had to be supported on two chairs. The patient could not reach her navel with her hands by one and one half feet. When her family wished to move her they rolled the tumor and she went with it. Spohn reduced the size of the tumor gradually by tapping, then opened the abdomen and removed the cyst sac, which weighed forty pounds. The total weight of the tumor was 328 pounds. The patient made a good recovery.

California Medical and Surgical Reporter, Los Angeles

February

- 60 Prognosis and Treatment of Acute and Chronic Nephritis R W Wernick Los Angeles
- 61 *Treatment of Malignant Tumors A. Solland Los Angeles
- 62 *An Unusual Case of Pregnancy J F Spencer Gardena
- 63 *Rare Case of Hematoma C. Freedman Los Angeles
- 64 *Metastatic Melanosarcoma C A Smaller Los Angeles
- 65 Ichthocoele Cyst Occluding the Proximal End of the Stomach H I Barton Los Angeles

61 Treatment of Malignant Tumors—Solland favors the employment of the Roentgen ray in conjunction with surgery in attacking malignant disease. The raying should be begun immediately after the surgeon has removed the growth, or as much of it as possible. A little over a year ago he made an application of powerful x rays directly into the wound immediately following the extirpation of a large mammary cancer which was accompanied by a great deal of necrotic glandular involvement and pus. The wound healed quickly, without secondary infection and there has been no sign of recurrence. Two other patients were treated similarly and with equally good results.

62 Unusual Case of Pregnancy—Spencer relates the case of a woman aged 44, a multipara who had a very severe hemorrhage at seven and a half months. Four weeks from the date of this hemorrhage there was a slight flow, lasting the usual number of days. Three weeks later there was another flow which was followed by a third. The latter was accompanied by great bearing down pain. The os was dilated to admit three fingers and with but little aid the fetus and placenta

were delivered. The head of the fetus presented a flattened shape, there was neither odor nor blood from the surface of the placenta. The time from the supposed conception until the delivery of the fetus was fully ten months. The interesting feature of this case was the fact that the woman had two normal periods of menstruation, neither of which caused a miscarriage.

63 Rare Case of Hematoma—On examining a woman who was the victim of delayed labor, Freedman noticed a large globular mass, about the size of a fist, completely occluding the vagina. It was attached to the anterior vaginal wall, and its color and general characteristics pointed to its being a large hematoma. By careful manipulation it was possible to deliver the child, but another child was then discovered in the uterus, and in order to permit of its evacuation Freedman was compelled to incise the hematoma and turn out the clot. The child was delivered successfully with high forceps. All went well and the patient made a perfect recovery.

64 Metastatic Melanosarcoma.—The primary tumor in this case was located in the right anterior occipital convolution and was the size of a walnut. Another tumor was located in the right anterior central convolution near the left Rolandic fissure. Numerous metastatic tumors were found in all parts of the body. Some of the features of interest in the case were the apparent involvement of all the structures in the internal capsule without total and permanent hemiplegia and sensory disturbances, the involvement of the right Rolandic fissure without motor symptoms referable to the left side, the mild subjective symptoms, the non disturbance of special senses and the very slight mental disturbances, the almost complete amelioration of symptoms at times, the absence of metastases in the lungs, liver, heart, spleen and pancreas.

Journal of Cutaneous Diseases, New York.

February

- 66 Evolution of American Medical Education—Recognition of Dermatology in the Curriculum—Need of Clinical Concentration. W T Corlett, Cleveland.
- 67 Cases of Epidermolysis Bullosa, with Remarks on the Congenital Absence of Elastic Tissue M F Engman and W H Mook St. Louis.
- 68 *Prodromal Erythema of Varicella. H G Anthony Chicago

68 Prodromal Erythema of Varicella—Anthony has observed two cases which he believes were analogous to the prodromal erythema of variola. A child, perfectly healthy, suddenly, without prodromal symptoms or any disorder of the throat or stomach, broke out with an erythematous rash which was not scarlet fever like, but which was something special because of the watery discharge from the eye. The eruption was accompanied by a few chicken pox lesions. The varicella eruption developed fully and in forty eight hours the temperature fell to normal. In the case of the second patient the eruption was not accompanied by chicken pox and the temperature fell to normal in twenty four hours. Anthony is convinced that these were instances of prodromal eruptions.

California State Journal of Medicine, San Francisco

February

- 69 *Asphyxia Neonatorum A New Method of Resuscitation W Himmelsbach San Francisco
- 70 *Tuberculosis of Mesenteric Lymph Glands Symptoms of Intussusception Necessitating Resection of the Intestine H M Sherman San Francisco
- 71 The Value of Karyoscopic Investigations for Pathology and Diagnosis A E Taylor San Francisco
- 72 Conservative Treatment of Severe Ocular Injuries F Allport Chicago
- 73 Report of Committee on Vital Statistics W T G Dawson Fildridge Cal
- 74 Preliminary Report on Phlebosclerosis J B Frankenhelmer San Francisco
- 75 Semi Annual Address of President of Santa Clara County Medical Society J L Asay San Jose
- 76 Propriety of Cholecystectomy as an Initial Procedure in Gall Bladder Surgery T W Huntington San Francisco
- 77 Recent Complete Tears of the Perineum G B Somers San Francisco
- 78 Mercurial Infections in Syphilis H Morrow San Francisco
- 79 Undrawn Poultry and Fish F G Fay Sacramento

69 Resuscitation in Asphyxia Neonatorum.—The method proposed by Himmelsbach was first used by him in March 1903, since when he has applied it in 20 cases with uniform success. The method consists of a hypodermic injection of 1/1500 grain of sulphate of strychnia and 1/2000 grain of sulphate of atropin.

arterial tension This reflex varies in delicacy in different persons. It exists in all. Russell is convinced that there is a relation between this phenomenon and angina pectoris, and cites several instances in support of his contention. He shows that this hypersensitiveness of the vasomotor center, even in grave angina pectoris, can be reduced, controlled or even removed by dietetic measures, with the result that the anginous seizures are removed or greatly modified. In cases where the arterial spasm is associated with great anatomic change, either in the myocardium or in the coronary vessels, absolute cure can hardly be looked for, says Russell, but in all cases the symptoms of angina pectoris may be much ameliorated by conducting the treatment in accordance with what they indicate. Owing to the varying degree of intensity of the symptoms, Russell suggests that in classifying the cases the simplest distinction might be found in the terms angina pectoris major and angina pectoris minor, the former being confined to those cases in which there is believed to be permanent anatomic change in the heart or its vessels.

2 Food Fever—Under this term Smith describes an affection consisting of an attack of fever which comes on suddenly, being accompanied by signs, more or less pronounced, of digestive disturbance, lasting in its acute form for several days and lingering on in a modified degree for some weeks. If the attacks occur frequently—once a month or so—their effect on the nutrition of the patient is highly injurious. The subjects of the complaint are usually neurotic children of either sex between the ages of 3 and 12 years. The attack begins with headache, accompanied sometimes by vomiting, sometimes by looseness of the bowels, but always by signs of some kind of digestive upset. The temperature ranges from 101 to 105. The stomach resonance reaches higher than normal, and the edge of the liver can be felt one or two finger breadths below the costal margin. The urine is high colored, thick and acid. If the patient is left alone, or not treated properly, the temperature remains for some days continuously higher than the normal level. It generally rises a little after taking food and in the evening. At the end of a few days it subsides, either suddenly after a profuse sweat, or gradually, but is often moderately elevated for a week or even longer. To prevent and cut short the attacks, a careful diet is of the utmost importance. Steps must also be taken to prevent any fresh attack of catarrh which would keep up the derangement of the digestive organs. Hygiene is also of importance.

3 Drug Idiosyncrasies and Official Dosage—Hawthorne says that an official dosage must be recognized as a possible danger to free and responsible personal prescribing, unless its functions and purpose are strictly limited and defined. The personal factor provided by the individual patient should regulate the dosage of any drug which it may be necessary to give him. The careful adaptation of remedies both qualitative and quantitative to the wants and idiosyncrasies of the individual patient is an essential part of good practice. Conformity to a stereotyped scale of doses is out of harmony with the liberty and power of scientific prescribing.

4 Hereditary Syphilis and Enteric Fever—Rolleston cites a case which illustrates how a disease hitherto latent may be roused into fresh activity by an acute illness, though the latter is not etiologically connected with it. His patient, aged 10, had a typical attack of typhoid the diagnosis being confirmed by all known tests. On the forty-eighth day when convalescence appeared to be firmly established the patient complained of pain in the lower jaw which was accompanied by swelling. Under fifteen grain doses of potassium iodid three times daily, the condition speedily disappeared. On careful examination of the patient evidence of hereditary syphilis were found.

5 Measles in the Puerperium—Campbell's patient, a young primipara and her brother, a boy 6 years of age, were at a place of public amusement at a time when measles were rather prevalent. The following day both showed signs of having caught cold but the symptoms disappeared in about thirty-six hours. Three days afterward the woman had a perfectly normal labor and gave birth to a living healthy child. On the seventh day of her puerperium her brother showed marked catarrhal symptoms and on the next day the patient's tem-

perature was almost 100. A typical measles rash appeared, followed by some ear symptoms and a general acial edema. Both patients made perfect recoveries. As soon as the mother became ill the baby was put in charge of a nurse and isolated. Seven days afterward the infant began to be fretful and restless. There was some vomiting, aversion to food and a slight temperature. Within forty eight hours there was a most typical measles rash, well marked all over the body. The infant recovered. Campbell directs attention to the following points of interest. Though exposed at the same time, the symptoms manifested themselves twenty four hours sooner in the healthy boy than in the pregnant or parturient woman. The attack was more severe in the former than in the latter, and was least severe in the case of the infant.

9 Adhesive Mediastino Pericarditis—Bennion regards the pericarditis in this instance as probably of rheumatic origin. At the autopsy it was found that the pericardial sac was quite obliterated and that there were large calcareous deposits in the pericardium all around the base, especially over the inferior vena cava. The heart valves were all competent. The heart muscle was hypertrophied. The patient, a girl aged 13, had measles when a baby, but had never had rheumatic fever or any other illness of importance. She died about four months after the first symptoms were noted.

The Lancet, London
February 10

- 11 Aphasia. B Bramwell
- 12 Ethics of the Medical Profession in Relation to Syphilis and Gonorrhea. C Williams
- 13 Observations on the Etiology of Oblique Inguinal Hernia. R. W. Murray
- 14 Fatal Rupture of a Pyosalpinx During Labor. J. W. Robb
- 15 Hematologic and Chemical Observations in a Case of Splenomedullary Leukemia Under X Ray Treatment. J. C. G. Ledingham
- 16 Bilharzia Infection of the Vermiform Appendix. J. Burfield
- 17 Torsion of the Testicle. R. M. Going

13 Etiology of Oblique Inguinal Hernia—Murray has been struck by the marked resemblance as regards the shape, general appearance and relationship of the sac in operating for oblique inguinal hernia in infants, older children and adults. From this he infers that the hernias of the old and the young have a common origin, and that in all ordinary inguinal and femoral herniae the sac is preformed and of congenital origin. He suggests that the occurrence or not of hernia depends on two factors—the size of the opening at the internal abdominal ring and the strength of the processus vaginalis the opening at the internal abdominal ring be small and the muscles guarding it powerful, then the probabilities of a hernia occurring are slight. If, on the other hand, the opening is large and the inguinal sphincter weak, the probabilities of a hernia occurring are considerable. The frequent occurrence of inguinal hernia in infants would thus be explained.

16 Bilharzia Infection of Appendix—The patient whose case is reported by Burfield had an attack of appendicitis which eventually left him with a sinus leading to an abscess cavity in close connection with the proximal part of his appendix. This sinus was the means of entry of the bilharzia while the patient was bathing. The bilharzia ova were found in the appendix. There was nothing in the history of this patient to suggest bilharzia infection of the genitourinary tract or of the rectum. The patient never had a diarrhea and no blood or mucus was ever found in the stools.

17 Torsion of Testicle—This patient, aged 17 years, appeared to be suffering from an acute orchitis. The symptoms finally demanded operation. On opening the tunica vaginalis Going found a dark purplish mass in front which afterward proved to be the globus major of the epididymis, and behind it was the testicle of a fairly normal color and not much enlarged. Going dissected the tunica vaginalis from the surrounding parts ligated the cord with fine silk close to the surrounding dominant ring and excised it. A small drainage tube was placed in the lower end of the scrotum through a small incision. The original wound was closed with silkworm gut sutures and dressed with evansid gauze. The drainage tube was removed in forty-eight hours. The patient was allowed up on the fourth tenth day.

- 36 Scharlachtherapie und Scharlach Prophylaxe (serum treatment of scarlet fever) Campe.
- 37 Colloidal Nitrogenous Substances in Urine.—Zur Kenntnis der Alkoholunlöslichen bzw. kolloidalen Stickstoffsubstanzen im Harn E. Salkowski (Concluded)
- 38 *Epidemiologie des Abdominaltyphus. Kutscher
- 39 (XIII No 1) Ueber die traumatische Entzündung des Kniegelenkes (inflammatory affection of knee) Hoffa.
- 40 Ueber die Gewinnung von Dysenterietoxin H. Lüdicke
- 41 Ueber die Lagerung der Spirochaete pallida im Gewebe. A. Buschke and W. Fischer
- 42 *Enterogene Craniose A. A. Hymans van den Bergh and A. Grutterink (Rotterdam)
- 43 *Ueber tiefe Alkohol Cohn oder Alkohol Stornal Intektionen bei Trigeminaus- und anderen Neuralgien I. Ostwald.
- 44 *Die Bedeutung der Röntgenstrahlen für die Behandlung der lymphatischen Sarkome. M. Cohn
- 45 Antihomöplemente. J. Bordet (Brussels)
- 46 Pneumothorax und Recurrens-Lähmung (paralysis) Lublinski
- 47 Zur Therapie der habituellen Obstipation de la Camp

34 Abscess in the Pancreas.—A young butcher was suddenly affected with colic in the upper abdomen for twenty four hours which returned a week later. The colic then vanished, but discomfort persisted in the region and he felt ill. The bowels moved only after an enema, but the physician did not notice anything unusual in the stools. Chemical examination, however, revealed that the absorption of fat was very much disturbed. After a test meal of 1,000 gm. milk, 25 gm. butter and 100 gm. white bread, representing 49 gm. of fat (preceded by carmin to mark the test stools), the stools contained 192 gm. of moist and 63 gm. of solid substances, with 29.23 gm. of fat. Only 19.7 per cent. of the fat ingested had been assimilated. A lesion in the pancreas was assumed and the assumption was confirmed by the operation. The patient recovered after evacuation of the abscess found in the pancreas, although the absorption of fat still remained somewhat below normal. When the abdomen is opened in case of a pancreatic lesion the fatty necrosis usually attracts attention. In one of the 3 patients operated on by Brugsch and König this necrosis extended into the omentum and mesentery. It resembles melted fat, but may be absent even in case of pronounced pancreatitis, exudation taking its place. The fluid is sometimes reddish. Still more striking is the exudation into the tissues, the mesentery, colon and omentum being gorged with fluid. The engorgement is most marked in the mesenteric glands or in the glands on the mesocolon, which looked like sausages in one of their cases. Some of the engorged parts of the omentum clumped together to form apparent tumors which were misleading until their true nature was revealed by the laparotomy. The distribution of the pancreatic effusion is also instructive, as is explained in detail.

35 Affections of the Pancreas in Course of Diabetes.—Hirschfeld has been studying the catarrhal affection of the pancreas which is liable to develop in diabetics, having had occasion to observe 14 such cases. The catarrhal affection of the pancreas induces an acute exacerbation of the diabetic disturbances in the metabolism, it also causes local symptoms and is further distinguished by a tendency to recurrence. He presents evidence to show that in many cases of diabetic coma some acute affection of the pancreas is probably the principal factor. He has observed coma develop in diabetics after overexertion, influenza or an operation, but in other cases, when the coma is supposedly spontaneous and has been preceded for some time by gastrointestinal disturbances he is convinced that it is in reality due to the extension of the gastrointestinal catarrh to the pancreas. The severer the diabetes the greater the liability that the development of pancreatic colic may usher in diabetic coma especially when the colic is exceptionally severe. This occurred in 2 out of his 14 cases. The pancreatic colic may be slight and may be confused with gallstone colic or a stomach affection or with angina pectoris. The characteristic feature is that the glycosuria becomes aggravated during or immediately after the attacks. When other causes for the aggravation can be excluded it is safe to assume some affection of the pancreas. He thinks that such affections are more common in all forms of diabetes than is generally recognized. The most important sign of an affection of the pancreas in a diabetic is the disturbance in circulation evidenced by the absence of polyuria after copious ingestion of water. He tested 3 of his patients in this way and found that the amount of urine was increased only from 80 to 120 cc. after ingestion of 400 cc. of water under conditions in which normal individuals always showed

an increase of from 130 to 300 cc. The fact that an affection of the pancreas can influence the circulation is demonstrated by the appearance of edema during pancreatic affections. He is convinced that the pancreas is probably involved in every case of diabetes.

38 The Latest Views of Typhoid Infection.—Kutscher reviews the recent evidence which shows that persons may harbor the typhoid bacilli in their bodies for years after an attack of typhoid fever and thus prove a source of contagion for others at any time. The bacilli seem to lurk in the gall bladder after they have vanished from all other points in the body. No means have yet been discovered of annihilating the lurking bacilli. Women seem to predominate among these chronic "bacilli bearers." Contact infection is assuming more and more importance, and the principles of successful prophylaxis must be the same as for cholera and malaria. The chronic bacilli bearers should be excluded from such occupations as are liable to spread infection, especially in dairies.

42 Enterogenous Cyanosis.—Since this subject was discussed editorially in THE JOURNAL, July 8, 1905, van den Bergh has encountered 3 more cases and describes them here at length. One patient, a boy of 9, presented sulpho hemoglobinemia, the others were men of 31 and 51, presenting methemoglobinemia. Three other patients, women suffering from chronic obstipation, exhibited the same tendency to intense cyanosis, especially noticeable in the lips. Their blood also gave the typical spectrum for sulpho hemoglobin. The child had stenosis of the anus, with a fistula between the urethra and the rectum. The men had suffered for years from chronic enteritis. The attacks resembled cholera in the older man, who had never been in the tropics. The younger man had served for nine years as a soldier in India. In these patients the cyanosis could be produced and banished at will by putting them on a mixed diet or by restricting them exclusively to milk. Chemical tests demonstrated that the formation of nitrites in the intestine and their absorption by the injured walls were the factors causing the transformation of the hemoglobin into methemoglobin. The nitrites could be recovered from the blood—the first time, with one exception, van den Bergh says, that substances formed in the intestinal canal have been positively demonstrated in the blood.

43 Deep Injections of Alcohol for Relief of Neuralgia.—Ostwald's communications on this subject have been recently reviewed in these columns, page 300. He here reports 45 cases of severe chronic facial neuralgia cured by this simple means. He adds a little of some local anesthetic to the alcohol, and slowly injects it for what he calls the "temporary Gasserectomy." After from five to seven days he repeats the injection, if necessary, but once is usually sufficient. He follows Schlösser's technique closely and has found the procedure effectual, even for treatment of certain cases of spasmodic contracture and for sciatica.

44 Lymphatic Sarcoma Cured by Roentgen Rays.—Cohn has applied Roentgen treatment in 5 cases of malignant lymphoma or lymphatic sarcoma, with a complete cure in 3 cases, another patient is still under treatment and the fifth was dismissed, as the growth was too extensive for the prospect of a cure. To protect the skin as much as possible, he incloses the Crookes' tube in an impermeable cover with a small opening on one side to which is fitted a short metal tube, likewise impermeable to the rays. They are thus conducted through the tube to the growth, and pressure from the end of the tube on the skin expels the blood. The end of the tube is applied to a different spot on the skin each time, to avoid cumulative action. He has found this tube arrangement useful also to conduct the rays through the mouth to the tonsils or base of the skull in other Roentgen ray work. He noticed in some of his patients that the spleen became temporarily enlarged while the malignant lymphoma in the neck was being treated.

Deutsche medizinische Wochenschrift, Berlin and Leipsic

- 48 (XXXII No 1) Ueber die Miliartuberculose H. Ribbert.
- 49 Behandlung der Lähmungen (paralysis) R. Stintzing.
- 50 Syphilitische und heretische Pseudo-Osteomalacie H. Schlesinger.
- 51 Die Leistungen und Grenzen der Lokalanästhesie Braun.
- 52 Ueber die Wirkung von Cholla Injektionen auf die Leukoerythenzahl des Kaninchenblutes H. Werner and A. Lichtenberg.

valuable acquisition to the means of obtaining information in regard to the chemistry of the stomach under natural conditions, without inflicting on the patient the discomfort of the stomach tube (The Sahli test was described in these columns on page 1819 of vol xlv.) He has the patient swallow a little iodoform or methylene blue wrapped in a tiny square of fine rubber tissue tied with a piece of raw catgut. If the chemical functions of the stomach are normal, the catgut is soon dissolved in the gastric secretions, and the appearance of the blue in the urine or of the iodine in the urine and saliva testifies to the normal digesting power of the stomach juices. The little bag is swallowed after a meal and the absence of any reaction is proof that the bag was either passed along before the gastric juice could act on it or that the secretory functions of the stomach are defective. Kühn gives the findings in 54 cases of various stomach affections, comparing them with those of other tests. The "desmoid" test proved invariably an accurate and delicate criterion of the presence of free hydrochloric acid in the stomach contents. The cancer cases always gave a negative response as also severe cases of achylia.

63 Secondary Tumors in the Ovaries.—Amann distinguishes three varieties of secondary ovarian tumors: the edematous fibroma, the knobby carcinoma and the cystoma with fibrocarcinomatous deposits. He reviews the literature on the subject and warns that the ovary forms a peculiarly favorable soil for the development of secondary tumors in case of cancer of the stomach, breast, intestine, uterus, biliary passages or skin. The route of the metastasis is usually by dissemination of carcinomatous elements in the abdominal cavity, the peritoneum not taking up the scattered elements as readily as the ovary. The lymph and blood routes are also responsible in some cases. The metastatic ovarian cancers frequently form very large growths, entirely filling the abdomen, especially in case of young women. In all cases of neoplasms in the ovary, the stomach should be carefully examined before operating and be tested chemically. During the operation all the abdominal organs should be scrupulously investigated. The primary tumor is frequently so small that it may be easily overlooked. He has encountered 22 cases of metastatic tumors in the ovaries. In the last series of 4 the ovarian tumor was secondary to cancer in the stomach in 3 and to cancer in the colon in the other.

64 Treatment of Inflamed Uterine Adnexa.—Steffeck makes a principle of treating inflammatory and swollen conditions in the adnexa with conservative measures at first, rest in bed, superheated air, etc. but if operation becomes necessary he makes a vaginal incision supplementing it by removal of the adnexa in case of chronic tumefaction. In the severest cases he removes the uterus. He has had a mortality of only 2 in 145 cases treated in this way. Omitting the cases in which a laparotomy was impossible, his mortality was only 7 per cent.

66 Convulsions Accompanying Hemorrhage in Pancreas.—The fatal hemorrhage in the pancreas in the case described was not diagnosed during life. The onset was accompanied by convulsions. The patient was a corpulent woman in senile dementia.

72 Etiology and Treatment of Eclampsia.—Liepmann has continued his researches on the placenta of eclamptic women, his latest series including 67. He found evidence in all of them of the presence of a toxin which is not encountered in normal placenta. It must be identical with the eclampsia toxin, as the more of the toxin that is found in the placenta the less serious the maternal eclampsia, while when there is little of the toxin in the placenta a larger amount is circulating in the maternal blood. He is convinced that the chorionic villi are concerned in its production, and that the placenta, therefore, is the place of its production. The toxin displays marked affinity for the brain cells which are paralyzed by its action and which neutralize it. The toxin also acts most injuriously on the kidney parenchyma and next on the liver. The injury to the liver is always secondary to the intoxication. An existing albuminuria is increased by the effect of the toxin. He urges that immediate delivery, therefore, should be the rule for all cases of eclampsia. He gives diagrams comparing the mortality in the expectant and rapid delivery methods of treatment. The expectant treatment

at certain clinics gave a mortality of 30 per cent, while the mortality at others has been only 8, 8 and 18 per cent since the rule has been followed of delivering all eclamptic parturients without delay. Saline infusion and venesection have sometimes proved useful, and also artificial respiration, according to Sylvester's method, kept up for hours when the patients were very comatose and respiration was shallow. At Bumm's clinic the lowest mortality of all, 18 per cent, is reported in 79 cases since April, 1904. None of the women with less than five attacks died. Others were saved who had had ten and thirteen attacks. Experiments are now under way in the effort to produce a serum for the treatment of eclampsia. (See editorial.)

78 Surgical Treatment of Tabes.—Schüssler advocates surgical stretching of the nerves after incision as the most rational and effectual of all surgical measures applicable to tabes. He states that tabes is always accompanied by a perineuritic or neuritic process at the periphery, and nerve-stretching is indicated. Its chief effect is in inducing hypereamia, he thinks, and he applies it at the earliest possible moment, insisting that the anatomic findings refer to the periphery the beginning of the lesion in tabes. He has thus treated 44 patients, performing 82 of these nerve-stretching operations on them after an incision. The conditions were most deplorable in a number of the cases, and one patient, much debilitated by mercury and iodid treatment, succumbed to pulmonary embolism.

Hospitalstidende, Copenhagen

Lost indexed XLV, page 1614

- 79 (XLVIII No 33) Appendicitisstilfældene i 25 Aar paa Kommunehospitalet i Copenhagen. C. Wessel
- 80 (Nos 34-35) Behandling af Larynx Tuberkulose. V. S. Stein
- 81 En Rhinoplastik. L. G. Digmann
- 82 (Nos 36-38) Om den kvindelige Pseudohermafroditisme. J. Fibiger
- 83 Meningitis efter Parotitis. L. Bentzen. One case
- 84 (Nos 39-43) Om Tuberculosis conjunctivæ (Isaer Lupus conjunctivæ) og dens Behandling. K. Lundsgaard
- 85 *Spirochaete pallida* i Milten af et syfilittisk Foster (in spleen of syphilitic infant). A. Brønnum and V. Ellermann
- 86 Attitude of Physicians to Use and Abuse of Alcohol.—Vor Stilling som Læger til Brug og Misbrug af Alkohol. P. D. Koch
- 87 Prostatahypertrofiens Behandling. T. Rovsing
- 88 Throat Troubles from Excessive Use of Speaking Voice.—Om Behandlingen og Forebyggelsen af Halslidelser fremkaldte ved professionel Brug af Talestemmen. H. Mygind
- 89 Modified Vaginal and Aspirating Tube.—En lille Modifikation af de almindelige Vaginal Rør og Saarspidsen. O. Horn
- 90 (No 44) Appendicitis og dens Behandling paa Aarhus Kommunehospital. E. Müller
- 91 Sma terapeutiske Meddelelser. K. Lundsgaard.
- 92 Sterilization af Laminaria. J. Kuhn.
- 93 (Nos 45-47) Action of Light Bath on Blood Pressure etc.—Det kemiske Livnads Virkninger paa Respiration, Blodtryk og Kredsløbsbetingelser. K. A. Hasselbacht
- 94 Kongenital Deformities.—Om nogle medfødte Misdannelser af Extremiteterne. P. N. Hansen
- 95 Djendommelige Celler i Spinalvæsken ved et Tilfælde af Poliomyelitis acuta (peculiar cells in spinal fluid). V. Ellermann
- 96 (No 48) Studier over den kroniske Gastritis. Achylia gastrica ved Lungelidelse. K. Faber
- 97 Work Done by Female Patients.—Kvindelige Patienters Arbejde paa Haslev Sanatorium. O. Helms.

80 Laryngeal Tuberculosis.—Stein encountered 170 patients in 474 with tuberculosis of the lungs who presented symptoms of tuberculous involvement of the larynx. The most frequent symptom was hoarseness. About 77 of the patients complained of local pain and 72 of difficulty in swallowing from the first. He was able to improve the condition in 68, so that all pain and difficulty in swallowing passed away, and 8 patients were clinically cured. A number of other patients were materially relieved, although there could be no question of much improvement in their cases. When the diagnosis is assured he institutes general as well as local treatment for the tuberculosis. He commences with prolonged inhalations of menthol twice a day. This frequently proves sufficient to relieve the pain and other symptoms. It is very important to refrain from using the voice, he requires his patients to write all they have to say and not to speak at all. As a last resort he occasionally finds it necessary to use local anesthesia in the form of cocaine or some similar preparation in olive oil.

81 Tuberculosis of the Conjunctiva.—Lundsgaard declares that when the tuberculous process in the conjunctiva is not too large for radical extirpation it should be excised into sound tissue. If the process is too large for this but has not yet in

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TWO POSSIBLE CAUSES OF EMACIATION NOT GENERALLY RECOGNIZED *

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Some physicians and many laymen are in the habit of thinking and speaking as if the bulk of the human body could be increased or diminished as simply as we load and unload a vessel. Pour in the cargo and the displacement increases, hoist it out and she rides light on the water. But to feed a patient up or to starve him down is not nearly so simple.

Our state of nutrition depends on the number, the contents and the activities of our body cells, but these cells are not buckets to be filled or emptied at our pleasure. They multiply or atrophy, take up food or reject it, burn fuel or refuse to do so according to their own laws. Without food they can no more do their work than a miner can dig coal or a composer produce sonatas. But no one supposes that you can get good music simply by supplying good food, and it is equally irrational to imagine that good food means good nutrition, independent of the creative and constructive talent of the individual cells. Good food, properly utilized, makes the composers and the cells able to do their work, provided they are otherwise fit for it.

These considerations can be expressed as follows:

SOME FACTORS IN NUTRITION

- A Ingestion of Food (in quantity and quality suited to individual needs)
- B Utilization of Food (digestion absorption metabolism excretion)
- C Cell growth as influenced by
 - I AGE FILLING OUT IN YOUTH ATROPHY WITH AGE (ARTERIAL?)
 - II SEXUAL FACTORS (CASTRATION PARTURITION MENOPAUSE)
 - III INTERNAL SECRETIONS (ACROMEGALY PAGET'S DISEASE MYXEDEMA GRAVES DISEASE)
 - IV SLEEP AND OTHER FORMS OF REST (RECREATION CHANGE ETC.)
 - V EXERCISE AND OTHER FORMS OF ACTIVITY (WORK)
 - VI HEREDITARY INDIVIDUAL AND PSYCHIC FACTORS

The rest of my paper is a discussion of some of these items.

I pass hastily over the factors grouped under A and B. Food requirements exemplify very well that individual factor in hygiene to which I have recently called attention.¹ For example, a corpulent person is not always one who eats more and exercises less than his lean neighbor. He is one who eats more and exercises less than his individual constitution demands.

But food in the intestinal canal is still outside the cells. Faults in digestion, absorption, metabolism (e.g., diabetes mellitus) or excretion (nephritis) may render food not merely useless, but actually poisonous to the body cells. Hence, if these activities are themselves out of working order, "good food and plenty of it" may destroy instead of build up the body.

It is, however, to the factors influencing nutrition grouped under C that I wish to direct attention, and my text is this: Cell growth, cell multiplication and cell nutrition are profoundly influenced by age, by sexual influences, by internal secretions, by sleep and exercise, and by a multiplicity of hereditary, individual and psychical factors not yet clearly distinguished.

I AGE

In the process of growing up, there is a period when a youth has reached his full height, but has not yet "filled out," as we say. He eats voraciously and seems to "take care of his food" perfectly, but for the thickening up of his body the time has not yet come. A year or two later his cells take on a new type of activity, a new pace, and, without any change in the amount or kind of food taken, his body changes its habit, his nose and jaws grow, and his tailor has to cut his clothes so as to allow for a good deal more beam, though his length over all is the same.

After a time, and without any corresponding change in diet, this furious new production of cells slackens. Growth is complete, or nearly so. The cells again change their type of activity, and now maintain, without notably increasing, their number and their size.

A long period of stability and conservation follows, lasting through the prime of life. Then comes one of the changes in the mode of cell activity, in which I am just now especially interested. I mean the emaciation that develops with increasing age and often without any corresponding change in diet. It is a familiar fact that most elderly persons are thin—thinner than they were in the prime of life. Occasionally this loss of flesh may occur within a relatively short time and may give rise to grave but unfounded apprehension or to a mistake in diagnosis.

On Oct. 1, 1904, I saw, in consultation, a sea captain aged 49, who had lost 90 pounds of flesh in thirteen months (original weight 265, present weight 175). His health was not bad, his appetite and sleep were excellent, his diet was unchanged, but he and his family physician were not unnaturally alarmed by this loss of weight. To what was it due? I made as thorough an investigation of his organs and functions as I knew how to make and found nothing but a marked beading and some hesitation therefore, I gave the opinion that he was simply undergoing rather faster than the average the atrophy of old age. The subsequent course of his case has apparently confirmed this opinion. At any

* Read before the San Francisco County Medical Society.
1 Individual Factors on Hygiene. Boston Medical and Surgical Journal, June 17, 1905.

rate no known disease has developed since that time. His weight continued gradually to fall until it reached 155 about Jan. 1, 1905, since then it has remained practically stationary and he feels as well as ever. No treatment was given.

But we believe that "a man is as old as his arteries." Is it not likely that this emaciation of old age is connected in some way with arteriosclerosis? Since this idea occurred to me I have been noting the recent variations in weight of arteriosclerosis patients seen in my clinic at the Massachusetts General Hospital. Table 1 shows that 85 per cent of these cases have lost markedly in weight (15 to 60 pounds) within the period in which it is reasonable to suppose that they acquired the arterial degenerations now existing.

TABLE 1. EMACIATION IN TWENTY CASES OF ARTERIOSCLEROSIS (NOT SELECTED)

Number	Hospital Number	Loss of Weight		Age
		Pounds	Years	
1	770	20	10	65
2	428	25	10	70
3	2117	23	20	70
4	4730	23	2	60
5	4150	31	10	77
6	1384	10	10	79
7	2288	19	19	63
8	701	20	20	68
9	717	48	1	72
10	4518	1	1	56
11	421	23	1	58
12	1973	21	10	53
13	7052	20	20	62
14	4594	20	5	65
15	5127	15	15	65
16	411	15	7	62
17	714	3	3	62
18	4691	9	7 weeks	52
19	4047	5	46 years	66
20	2913	Gained weight (3 pounds)		59

Average loss in 19 cases, 23.5 pounds

It is, I suppose, the usual experience to find most arteriosclerosis patients thin. It is not merely that emaciation makes it easier to feel the degenerated arteries. The fat arteriosclerotic is, I believe, really less common, although I have not yet collected statistics sufficient to prove this. It may very well be that both the emaciation and the arteriosclerosis are due to a common cause and are not related to each other as cause and effect. All that I am concerned to show is that during the years in which arteriosclerosis is prone to develop the individual is apt to lose weight, usually little by little, sometimes with rather alarming rapidity.

II SEXUAL FACTORS

I shall merely allude to certain well-known facts which should make us realize better than we often do how powerful are the mysterious energies of sex in their influence on nutrition and how completely subordinate a rôle is played in certain cases by the more simple and obvious factors, like the amount and kind of food. We are all familiar with the marked changes in build and nutrition which are produced when by castration we turn a bull into an ox, but we do not always stop to notice that this change is relatively independent of any variation in diet. In some animals it has been shown that castration makes no difference in metabolism and that any increase in weight which occurs must be referred to the change in the animal's habits. I know of no direct investigation of this matter in human beings.

The increase in flesh so familiar in women after parturition and at the menopause seems in all probability to be guided by sexual influences. I believe that I have noticed in engaged couples a loss of flesh not accounted for by any variation in diet, sleep or exercise. This is, however, a more doubtful point.

III INTERNAL SECRETIONS

Myxedema patients certainly gain weight and exophthalmic goiter patients certainly lose weight without any corresponding observable change in diet, digestion, absorption or excretion. The metabolic processes are influenced profoundly. For example, it has been estimated that exophthalmic goiter patients require from 10 per cent to 20 per cent more food to maintain weight than normal individuals.² Otherwise they will emaciate progressively, despite normal appetite, digestion and absorption.

That acromegaly and Paget's disease are due to faulty internal secretions is not by any means proved, but for the purpose of this article no harm is done by so regarding them. What we see in these diseases is that certain tissues suddenly take a start and grow independently of any known changes in the amount or kind of food furnished to the individual. A group of cells takes on a new habit of growth and reproduction and rushes ahead under the guidance of forces wholly outside the pale of the ordinary intake and digestion of food.

IV SLEEP

Two years ago my attention was called by the following case to the possibility that emaciation might be due to loss of sleep. A plumber, aged 56, consulted his physician for substernal pain suggesting aneurism, but there were no pressure symptoms and no other physical signs except a well-marked shadow shown up by radioscopic examination and corresponding precisely to that which might be produced by a small aneurism. A remarkable feature about the case, however, was this. In the four months during which he had noticed the pain, he had lost 38 pounds of flesh (183 to 145), although his appetite and digestion had remained excellent throughout. His urine was normal and no other cause for the emaciation could be found. On account of this inexplicable loss of flesh and the absence of any signs of aneurism except the pain and the radiographic shadow, his physician was inclined to think that there was malignant disease in the mediastinum. After seeing this case in consultation and noting that throughout his illness his sleep had been considerably disturbed by pain, I looked up the records of 22 other aneurism cases recently seen in my clinic and in the other departments of the Massachusetts General Hospital and found that all but two of them had lost very markedly in weight and in sleep, though in most cases their appetite was unimpaired.

I have been unable to think of any sufficient reason for the loss of flesh in these aneurism cases unless it is true that loss of sleep (due to pain) prevented the normal processes of tissue repair on which the maintenance of nutrition, in part, depends. This theory is not proof, and will need, I suppose, a great deal of experiment to prove it, but meanwhile I have noticed one or two straws pointing in that direction. First, the haggard look so often seen in the faces of those who have passed a sleepless night. This must be due, I think, to an actual emaciation in the facial tissues. It certainly has all the appearances of local emaciation. Secondly, I have noticed that in some cancer cases, with good appetite and digestion, nutrition did not begin to fail until the pain was sharp enough to prevent a proper allowance of sleep. Thirdly, the loss of weight of some athletes as a crucial contest approaches seems to me perhaps best explained in this way.

TABLE 2.—EMACIATION IN CASES OF THORACIC ANEURISM

Name	Hospital Reference	Loss of Weight	Remarks
Mahon	Priv Rec B 2 p 237	58 lbs. in 6 weeks	Appetite and digestion good
Smith	594-74	32 lbs in 18 mos.	Symptoms for 7 years
Allerson	594-42	40 lbs in 7 years	
McCafferty	490-124	25 lbs in 4 months	Appetite good
Shannon	530-154	20 lbs in 1 year	
N cholas	585-34	17 lbs in 2 months	Digestion poor
Stone	549-162	35 lbs in 4 months	
Winslow	533-162	30 lbs in 10 years	Appetite good, no distress
Wheelwright	639-70	25 lbs in 16 years	
Deffur	532-20	30 lbs in 1 year	Digestion good, poor appetite
Bernard	627-12	25 lbs in 1 year	
Ebera	527-133	21 lbs in 1 year	Appetite and digestion good
Jenkins	531-102	45 lbs in 6 months	
Gilkey	541-56	20 lbs in 2 years	Poor appetite
Kinsman	490-16	13 lbs in 2 months	
Peck	541-60	23 lbs	No digestive symptoms
Toosa	526-96	60 lbs. in 2 years	
Murray	526-170	44 lbs in 1 year	Appetite good, slight dyspepsia
Cassini	515-88	20 lbs in 4 months.	
Taylor	17296*	8 lbs in 1 year	"Several pounds in a few weeks"
	17366*	35 lbs. in 3 months	
	4569*	20 lbs in 1 year	
	594-66	"Great emaciation"	
Winters	565-42	"Progressive loss of flesh"	"Very little loss"
Johnson	485-18	"Progressive loss of flesh"	
Forsyth	833-53	"Very little loss"	No loss of weight.
Annebale	276-23	"Very little loss"	

* Out patient department Average loss in 22 cases 29 4 pounds.

I repeat that I do not consider that I have given proof of the truth of this suggestion that insomnia is a cause of emaciation. I mention it chiefly because I wish to get the opinion of other men on the point and to find out whether any observations besides those quoted have already been recorded.

V EXERCISE

On the well-worn topic of the relation of bodily exercise to nutrition I wish merely to emphasize two points

1 In "building up" a patient by rest and forced feeding it is fat and not muscle that we build. There is no evidence to show that muscle can be increased except (a) by the natural growth of the body, (b) by the adaptation of the mature body to a gradual increase of muscular work, (c) by the extraordinary regenerative processes that occur in convalescence from wasting diseases.³

2 Exercise increases weight when it increases muscle and decreases weight only when the gain in muscle is overbalanced by a greater loss of fat. This explains why some athletes gain and others lose in weight in the earlier part of the football season before any of the other influences which affect them later in the season have become operative (insomnia, "staleness," neurasthenia).

VI HEREDITARY, INDIVIDUAL AND PSYCHIC FACTORS

Inextricably mingled in their operation are some of the individual peculiarities (inherited or acquired, physical or psychical) which affect nutrition. There are some persons whose tissues are so repellent that it seems as if no amount of stuffing with food of any kind would fill out their lean shanks. Others seem fatally predestined to obesity after a certain age and, despite a restriction of diet which would keep an ordinary per-

³ Investigations of the metabolism of convalescents have shown that their gain weight and muscle even if their supply of food is so restricted that a normal person would lose weight on it. When the cells are thus aroused it is impossible to check their magnificent regenerative energy even by semistarvation.

son emaciated, they take on fat at an extraordinary rate.

Trainers are accustomed to say that nervousness and "overtraining" have a controlling influence in the loss of weight which is observable in many athletes when a "big game" gets near. Aspirants for political office and business men in crises lose weight under the conditions of anxiety and excitement which increase as the critical day approaches. Whether these physical influences affect us through their direct influence on metabolism or indirectly through loss of proper sleep (proper in quality as well as in quantity) I do not know. The subject is one of practical importance as well as of scientific interest and deserves careful study.

SUMMARY AND CONCLUSIONS

1 Loss of weight (gradual or fairly rapid) is often observed as a part of the aging process in persons past middle life.

2 This emaciation is often associated with arteriosclerosis, possibly as a result of it, possibly as the concomitant effect of some third (unknown) factor.

3 The rapid gain in weight often seen in growing children and in the convalescence from wasting diseases is not directly a result of abundant food and may occur even when the food supply is far below normal. The gain must be referred to an extraordinarily rapid cell production due primarily to heightened growth-energy in the cells themselves.

4 That influences connected with the organs of sex may exert a controlling force on nutrition is strongly suggested by the changes in flesh and figure following parturition and the menopause.

5 The importance of internal secretions in the maintenance or perversion of nutrition is exemplified in the emaciation of Graves' disease, the increased weight of the myxedematous, and perhaps in the more local hypertrophies of acromegaly and Paget's disease.

6 The possibly decisive influence of insomnia on weight is suggested by the rapid emaciation sometimes occurring in cases of aneurism when sleep is prevented by pain, though appetite remains excellent.

THE GENERAL CONDITIONS ASSOCIATED WITH INSANITY

THEIR CONNOTATIONS AND CERTAIN DEDUCTIONS AS TO THEIR SIGNIFICANCE *

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The thesis to be defended in this paper is formulated in the following statement: There can not be special change in an organ without general disease in the rest of the organism, and in the study and treatment of the special condition the general involvement and its extent are the most important.

There are two assumptions in this connection which may be made concerning the human organism, based on what is known of its cytology and what has been demonstrated as to the processes of its functional activity. First, that the primary functions are those of vegetation, and that all others are related and in sequence to some form of activity involved in the processes of nutrition, second, that the nervous system is the last in the order of

* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Fifty-sixth Annual Session, July 1906.

Under 'mental state' we designate the manifestations of mental aberration present at the time of admission, and in such terms as seem to us most primary and least liable to misinterpretation

Under "form of sense perversion" we enumerate the manifestations of perversion in the special senses as we have been able to detect them The same plan has been followed in the two other subheads of the second table The statement of the manifestations of intellectual impairment as we have observed them, and the nature of the delusion that they represent

In the third table is recorded our observation of the physical defects found and the affections of the general nervous system

The other tables cover the result of physical examination and need no explanation

These tables, and the methods of study involved in their preparation, have been in use long enough for us to formulate some conclusions as to their value as a means of record and their significance with relation to

proximately 13 per cent., were classed as senile degenerates

In this study the term heredity is used to indicate any diathetic condition in the parents or grandparents that, on account of its interference with vitality, might result in the production of defective offspring

One hundred and sixty-six men and 119 women had a neurotic heredity, 269 men and 212 women had a heredity of insanity, 135 men and 76 women had a heredity of alcoholism, 199 men and 170 women had a heredity of phthisis, 59 men and 70 women had a heredity of rheumatism, 72 men and 266 women had a heredity of cancer Concerning 504 men and 416 women we could not obtain definite information, but what evidence there was, coupled with the history of their mental status, would have classed them relatively among the different subdivisions here given

In the families of 126 men and 120 women there was a concurrence of insanity, in the families of 89 men and 50 women phthisis, in the families of 7 men and 13

TABLE 1—GENERAL MANIFESTATIONS OF ABERRATION (MEN)

Degree of Defect	Heredity							Concurrence				Mental State				Form of Sense Perversion								Form of Intellectual Perversion				Nature of Delusion								
Form of Degeneration	Neurotic	Insanity	Alcoholism	Phthisis	Rheumatism	Cancer	No Information	Insanity	Phthisis	Cancer	Epilepsy	Rheumatism	Excitement	Depression	Delirium	Stupidity	Dementia	Olfactory	Visual	Auditory	Gustatory	Tactile	Visceral Consciousness.	Sexual Excitement	Sexual Perversion	Not Apparent.	Grandiose Ideas	Depreciatory Ideas	Persecutory Ideas	Confusion	Religiosity	Systematized	Variable	Undefined	Not Apparent	
Unstable	24	39	25	25	7	6	59	12	10	10	2	1	72	83	213	29	23	5	31	79	163	20	74	13	8	6	61	13	14	87	88	18	9	40	80	42
Primary	70	97	46	79	19	32	115	37	25	2	2	2	111	213	291	29	7	4	43	29	239	20	46	25	50	159	45	23	148	183	55	7	49	179	147	
Consecutive	54	106	47	79	39	31	231	65	47	6	2	2	185	291	291	33	23	4	29	77	239	4	25	54	28	183	101	59	247	254	85	21	130	200	128	
Senile	13	37	19	20	4	3	99	14	1	1	1	1	64	91	7	8	180	1	29	77	4	17	21	4	2	87	17	9	163	69	16	7	39	104	53	
Totals	166	269	135	199	59	72	304	126	89	7	3	14	442	678	42	77	723	10	193	608	36	151	115	109	78	491	176	104	535	812	175	38	258	663	370	

TABLE 1—GENERAL MANIFESTATION OF ABERRATION (WOMEN)

Degree of Defect	Heredity						Concurrence		Mental State		Form of Sense Perversion						Form of Intellectual Perversion			Nature of Delusion															
Form of Degeneration	Neurotic	Insanity	Alcoholism	Phthisis	Rheumatism	Cancer	No Informa- tion	Insanity	Phthisis	Cancer	Epilepsy	Excitement	Depression	Delirium	Stupidity	Dementia.	Olfactory	Visual	Auditory	Gustatory	Tactual	Visceral Con- sciousness	Sexual Ex- citement	Sexual Per- version	Not Apparent.	Grandiose Ideas.	Deprecatory Ideas.	Persecutory Ideas	Confusion	Religiosity	Systematized	Variable	Undefined	Not Apparent.	
Unstable	26	53	19	33	13	13	23	12	11	6	6	15	12	121	38	12	18	1	38	27	4	10	12	11	8	76	19	44	104	88	40	2	26	110	38
Primary	44	57	23	51	18	11	53	16	12	6	1	1	15	167	24	12	12	2	29	107	8	10	13	47	15	101	31	36	134	138	23	2	32	111	92
Consecutive	41	78	31	63	18	11	113	14	12	6	1	1	98	167	13	37	12	2	74	223	20	21	13	30	11	121	31	92	249	164	80	78	205	111	92
Senile	8	14	3	12	3	3	83	16	1	1	1	1	40	72	4	21	105	2	21	53	6	6	13	5	1	53	11	22	79	61	15	6	60	65	37
Totals	119	212	76	170	65	263	416	120	50	13	10	11	266	454	50	169	546	17	160	416	38	47	67	88	33	356	70	194	566	449	170	42	156	488	232

insanity and its manifestations The result of this method of study has been to determine the relation of the performance of the vegetative functions to mental activity in the insane and the influence of disease conditions, or impaired functional activity in the body organs, in the production and maintenance of perverted mental activity, as well as the relation between chronic degenerative changes in these organs and similar changes in the brain

From Jan 1 1894, to Jan 1, 1904, there were admitted for the first time 2,366 persons, 1,429 men and 937 women Out of this total 165 men, approximately 12 per cent and 181 women approximately 20 per cent were classed as unstable 476 men, approximately 33 per cent and 246 women approximately 26 per cent, were classed as primary degenerates, 582 men approximately 41 per cent and 388 women, approximately 41 per cent were classed as consecutive degenerates, 206 men approximately 14 per cent and 122 women ap-

proximately 13 per cent, were classed as senile degenerates

women cancer, in the families of 3 men and 11 women epilepsy, in the families of 14 men rheumatism, in the families of 11 women paralysis It is interesting to note that in both heredity and concurrence, insanity and phthisis occurred with the greatest relative frequency The association of cancer with the heredity and concurrence of so many of the women is also significant

We note that 422 men and 266 women were excited, 678 men and 454 women were depressed, 42 men and 50 women were delirious, 77 men and 109 women were stupid, 442 men and 546 women were demented

All of the patients who were depressed at the time of admission became excited in some degree before they recovered or lapsed into dementia, while all of the patients who were excited at the time of admission became depressed Besides, those patients who were depressed at the time of admission, who recovered, and were again admitted were excited in the beginning of the second attack while those among them who were admitted for

this connection it should also be recognized that, as it is the principal function of the general nervous system to direct the activities of the rest of the organism, a failure in this function would, of necessity, interfere with the normal activity of the vegetative organs, thus reducing their capacity for work, lowering the general vitality and further decreasing the capacity of the general organism for adaptation to external relations, by involving the retention, not only of the waste products of its activity, but also the generation of toxic substances from the food materials taken into the digestive tract. Finally, we have to consider that, while these conditions affect the majority of individuals in some degree, only a very small percentage of those affected ever become the victims of mental aberration or degenerative brain disease.

Our experience has taught us that, while the extent or degree of the mental disturbance is not necessarily in proportion with the amount and nature of the disease or functional failure in the vegetative organs, in those cases where the degenerative change in the general nervous system is going on, with progressive mental reduction, there is a similar process, developing *pari passu* in the rest of the organism, slowly and unequally in ordinary dementia, rapidly and comparatively uniformly in general paresis, insular sclerosis and hereditary chorea. From these observations it seems obvious that there must be involved in the development of insanity, not only the directly acting cause furnished by the environment of the individual, but also instability or degree resulting in a limitation of its potentiality to a varying degree. Furthermore, the groups into which the various manifestations of insanity would naturally fall, would be made up of those individuals in whom there was the same relative degree of defect, and the variations among individuals in the different groups would be the obvious result of difference in experience and environment. In other words, mental activity must necessarily be correlated with all of the organic processes, of which it is the synchronous expression.

Primarily, then, we have to deal with the cerebral potentiality of the individual, as influenced by the conditions in his environment which exhaust this potentiality directly by overtaxation, or indirectly by the influence of impaired vitality in the general organism in further reducing the mental capacity of the individual. Next in importance comes the recognition of the fact that in any given environment the general conditions are practically uniform for all who are included, consequently, if these conditions are harmful to some of those who live under them there must be some inherent weakness in the individual which unfits him to adapt himself to them, so as to conserve his own welfare. When this inability is in the direction of physical activities the result is in recognized as equally obvious that the lack of mental capacity which shows itself in imperfect control and incapacity for persistent effort are evidences of instability and defect and therefore the expression of a limited cerebral potentiality. A careful study of the natural history of insanity will show also, that the mental aberration exists for a long time before it is manifested in the conduct of the individual and it is a well-known fact that it may be present during his whole life without materially interfering with his relations with those about him. What is it then, which makes manifest the insanity? It is the loss of control of the activities that are manifested in conduct. And this loss of control

always follows in the wake of mental reduction, that is, the process of dementia. It is for this reason that those who are not familiar with insanity, from constant association with the insane, can not comprehend the existence of mental aberration unless it is manifested in bizarre conduct, or appreciate mental alienation that is not shown by criminal acts or imbecility. It is, for this reason, too, that degeneration is thought of as a result instead of as a process and dementia as a terminal condition only, instead of as a loss of mental capacity, which may be slight or transient or extreme and progressive.

Postmortem, in acute insanity, there is nothing distinctive, and the periencephalitis and encephalitis which may be present does not differ from inflammation in the brain and its membranes in those who are not insane. In a few cases, where a large trephine opening in the anterior portion of the skull has enabled us to study the appearance of the membranes and brain surface during life, the distended arachnoid space, flattened convolutions and the white streaks along the vessels did not differ materially from the postmortem appearance in dementia, except that after death the fluid is most commonly gelatinous. The most conspicuous change in condition and appearance of the coverings of the brain results from the thickening and adhesion of the dura and pia along the median fissure. These adhesions and fibrous increase interfere with the emptying of the pial veins, and narrow and lumen of the longitudinal sinus, while it is probable that some pial adhesion occurs in almost every one after 35 years of age, these adhesions are at the vertex. It is the progress of this adhesion forward and its extension laterally that is the most constant concomitant of progressive degeneration of the brain in the intellectual sphere. The peculiar arrangement of the lymph channels in the brain also adds to the difficulty, when the circulation is interfered with, so that autointoxication in the brain may be apparent and persistent, when there is no evidence that it is general, and the arrangement of the cortical blood vessels shows how stasis may be present when the general circulation in the brain is not interfered with. The thickening of the pia and the progressive occlusion of its vessels in certain areas explains how easily the nutrition of the cortex may be interfered with permanently, while the resulting lymph and venous stasis mechanically accelerates the progress of atrophy. So that, postmortem, we find flattened convolutions and shallow fissures. These changes are, however, general, not specific, nor peculiar to the insane, although always present in cases of terminal dementia.

In cases of dementia the frontal lobes, anterior to the precentral fissure, are always atrophied, and the extent of the atrophy is in definite proportion with the degree of dementia. This is the only constant macroscopic change in the brain in our experience, but there is usually associated with this shrinkage in the frontal lobes atrophy in the convolutions surrounding the insula, and this atrophy is usually most marked in the convolutions of the operculum. Next in order of frequency is dimpling over the angular gyrus and the superior parietal lobule.

The morbid histology of the brain, in those dying insane, is not only not distinctive, but, as I have shown,¹ similar changes can be produced in the lower animals by starvation and exhaustion. In terminal dementia the

¹ The Pathology of Delirium
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AUTOLYSIS*

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TISSUE DISINTEGRATION

The most constant property of living matter is disintegration. This precedes every other manifestation of life of the simplest and of the most complex animated organism. The development of a fertilized egg goes with disintegration of its original structure. When the egg is placed under conditions which make the initial disintegration impossible, life remains suspended. Disintegration also is the most lasting property of living matter for when all other functions are extinct, this property is still in evidence, and, if conditions are favorable, the disintegration proceeds until all that could remain of organization or of structure disappears, giving place to a mixture of organic and inorganic substances.

Disintegration of organic matter present in the cells and tissues is also the primary source of that form of vital energy which controls most functions of a living organism. Contraction of muscle, secretion of glands, peristaltic movements of the gastrointestinal tract, growth and reproduction of an organism, are possible only so long as the breaking-down process continues. This has been realized by physiologists at all times. However, the mechanism and the exact nature of the chemical reactions associated with animal functions has never been very clear, and even to-day the question remains a topic of considerable controversy.

Lavoisier was the first to emphasize strongly the similarity between the chemical reactions in the living organism and those in the process of combustion. Ever since that time physiologists have adopted the term combustion in order to signify the chemical reactions in the organism which result in the production of animal energy. Physiologists speak of burning or non-burning in the human or in the animal body of protein, fat or sugar or burning of the body tissues and of body cells. Indeed, the ultimate products of the reactions in the body are very similar to those on the burning of carbonaceous material. Carbon dioxide, water and heat are formed in both instances. However, there has always existed an utter lack of information regarding the agents causing the powerful oxidation of organic material in the animal body. The simplest way out of the difficulty seemed to ascribe the power of combustion to a peculiar property of the living cell.

In recent years there has accumulated a great number of observations tending to show that various functions previously regarded as the result of life, as the result of cell assimilation and disintegration by the animal tissues, are actually occasioned by substances which can be isolated from the living cell. An instance illustrative of this statement is found in the work on alcoholic fermentation. Formation of alcohol from grape sugar by the yeast cell was regarded as a chemical reaction brought about by the activity of the cell. Alcohol thus was considered a catabolic product of cell metabolism. Mme. Manassein, and more convincingly Buchner, have demonstrated that from the cell can be obtained one substance which is capable of accomplishing the alcoholic fermentation of sugar in the same manner as the living cell. This startling discovery marks a radical change in our conception of the process of life.

For centuries it was thought that the activity of a complex organism was needed to manufacture spirits out of grape sugar, and the foregoing work demonstrated that the cell may be crushed, its life may be extinct, and one substance soluble in water may be extracted which possesses the power to accomplish the work of the entire cell. True, the substance is of a very subtle nature and needs to be handled with great care. It does not resist the action of heat and other strong chemical and physical agents, but while intact it is capable of inducing chemical reactions into which it apparently does not enter itself and thus is capable of performing work out of proportion to its own mass. Substances endowed with this power are designated enzymes or ferments. The work of Buchner caused a very intense interest to be directed toward the older and unsystematic work on the enzymatic processes in the cells of the simple and complex organisms.

As already stated, the source of all vital and animal energy lies in tissue disintegration, and the prevailing conception has been that the disintegration was brought about by the power of the living cell to burn its own components. It is the great merit of Salkowski to have shown that a cell or tissue in which all visible signs of life have disappeared still retains the power of self-dissolution, of self-disintegration, of autolysis. True, the phenomenon had not escaped the observation of earlier workers, and in 1871 Hoppe-Seyler wrote¹ "All organs suffering death within the organism, in the absence of oxygen, undergo softening and dissolution in a manner resembling that of putrefaction. In the course of that process, albuminous matter gives rise to leucin and tyrosin, fat to free acids and soaps. This maceration, identical with the pathologic conception of softening, is accomplished without giving rise to ill odor, and is a process similar to the one resulting from the action of water, acids and digestive enzymes." In 1874 the French chemist, Schutzenberger² observed similar changes in yeast which had been allowed to remain for from 12 to 15 hours in water suspension at a temperature of from 35 to 40 C.

However, before going into the details of the chemical analysis, attention has been called to the structural, morphologic changes which cells and tissues undergo when they are placed in conditions which do not permit continuation of life. It is well known that animal tissues and organs are readily invaded by micro-organisms, causing putrefaction. The application of the recent methods of aseptic surgery allows the removal of organs from the animal body and the preserving of them free from all contamination with micro-organisms. Hauser,³ as well as Rindfleisch and Meissner previous to him, succeeded in preserving tissues for months and years free from infection with any bacteria. In organs kept in absolutely sterile condition Hauser observed general softening, and microscopically he noted the destruction of the most typical structural part of the cell, of the nuclear material and decay of the mass of the cell, made apparent by the development of changes which are designated by pathologists as fatty degeneration.

Thus the term softening is not merely a figure of speech, but applies to an actual occurrence. This is made evident particularly through the work of Schut-

¹ *Tabliger Med. Chem. Untersuchungen*, 1871, p. 490.

² *Compt. rend.*, vol. lxxviii, and *Bull. de soc. chimique*, vol. xxi, p. 204.

³ *Arch. f. exper. Path. u. Pharm.*, vol. xx, p. 162, 1886.

* The fourth lecture in the Harvey Society course, delivered at the New York Academy of Medicine.

enberger and the workers who followed him. Normal fresh organs on extraction with boiling hot water give off only a small fraction of their constituents, while those that have undergone the process of softening allow a very considerable part of their substance to pass into the boiling water. Thus, fresh yeast on boiling with hot water leaves a residue consisting of from 20 to 21 per cent of its original weight, while the residue of yeast kept in water for from 12 to 15 hours does not exceed 13 per cent. However, in the experiment of Hauser, although the tissues were placed in conditions unfavorable for continuation of life, death set in slowly, and the possibility is not excluded that the softening was accomplished by the vital force not yet completely extinct. Also in the experiments of Schutzenberger this possibility was not excluded, besides, yeast always contains bacteria and it is difficult to separate the part of the changes wrought by the action of micro-organisms from that induced by the surviving yeast cell.

Salkowski was the first to preserve the material employed in his experiments under conditions which checked all other functions, leaving unassailed only the one of dissolution, in conditions in which bacterial growth was impossible. This was achieved by the use of chloroform water instead of the pure. Salkowski repeated the experiments of Schutzenberger on yeast and arrived at the same conclusions as the first observer. He extended the work to animal tissues, using the liver and muscle. The results are best seen in the following table.

From 1 000 grams of liver were extracted by hot water	Autolysed organ.	Control	Difference.
Organic substance	45.97 gms.	33.73 gms.	12.24 gms.
Ash	7.95 gms.	7.21 gms.	0.74 gms.
Phosphoric acid	1.957 gms.	1.859 gms.	0.098 gms.
Nitrogen in form of nitrogen ous substances	0.239 gms.	3.152 gms.	3.087 gms.

In the main experiment the finely-divided organ was mixed with three times its weight of chloroform water and allowed to stand and at given intervals analyzed. In the control experiment the organ was heated and then further treated in the same manner as in the principal experiment. The table clearly shows that, on standing, substances soluble in hot water have developed in the organ. Very similar changes occur in tissues subjected to the influence of digestive enzymes, either in the digestive tract or outside of the body. Because of this analogy Salkowski introduced the term "self-digestion" in order to designate the process occurring in tissues allowed to stand under antiseptic conditions. For reasons which will be made clear in the course of the discussion, the process later was named by Hofmeister "autolysis."

Thus the researches of Salkowski have established the fact that tissues, placed in conditions which do not allow contamination with live matter, undergo changes resembling those occurring during process of digestion, but they offered no information regarding the rôle played by the process in the economy of the organism, in those transformations of matter which create and maintain life. It was still undecided whether or not the capacity of self-digestion was a universal property of all tissues. The probability was not excluded that the autolysis of an organ was brought about by the action of enzymes absorbed from the gastrointestinal tract and transported to the various organs. The researches following those of Salkowski endeavored to give an answer to those questions. The solution of the first problem was comparatively an easy matter. It required only to repeat his experiments on various other organs. This was accomplished most successfully by the efforts of Hedin and Rowland.⁴ It may be noted here that the last two inves-

tigators employed in their experiments not the entire tissue nor the tissue extracts, but the plasma of the organs. In this manner they made certain that no cellular elements were playing any part in their experiments and that the reactions were caused by a soluble substance present in the plasma. Previously Schwiening,⁵ a pupil of Salkowski, had established the same fact by employing filtered tissue extracts. The work was further extended by Martin Jacoby⁶ and by Stookey and myself.⁷ As a result of all the work it may be regarded as established that the power of self-digestion is shared equally by all organs. The solution of the second problem, namely, of the origin of the autolysing power, required more ingenuity and perhaps more work. Attempts were made to obtain the desired information in various ways. If the digesting power present in the organs is due to a substance derived from the pancreas, the autolysis of organs must be influenced by the same factors in the same manner as pancreatic digestion, further, if that assumption be correct, one would expect to find among the products of autolysis those substances which arise on tryptic digestion.

Matthes sought to solve the question by removing the pancreas from dogs and studying the self-digesting power of their organs. The chemical composition of animal organs is very complex, but the pancreatic gland is capable of disintegrating all the principal tissue constituents, although it resorts to a different mechanism, perhaps to a different substance, for the digestion of the individual substance. The principal components of tissues are albuminous material, carbohydrates and fats. In the course of self-digestion all these components are disintegrated, and it is a matter of convenience to discuss separately the change which each of the components undergoes in the course of autolysis. Of all enzymotic processes that resulting from the breaking up of the proteid molecule has been studied in the greatest detail. For this reason the study of the proteolytic action of organs was employed for the investigations into the origin of the autolytic power of tissues.

Two proteolytic enzymes of distinct individuality have always been known—pepsin, elaborated by the glandular apparatus of the stomach, and trypsin, formed in the pancreatic gland. The principal point of distinction between the two substances is that one requires for its action the presence of acid, while the other is most active in the presence of alkali. Further, it has generally been accepted that pepsin is incapable of producing the same degree of cleavage as trypsin. The formation of crystalline products of amino-acids has been noted only on tryptic digestion. Most typical for the cleavage by the ferment of the pancreatic gland is considered the appearance of a substance giving a peculiar color test with bromin, named tryptophan. In the course of digestion by either of the two enzymes, albumoses and peptones are formed.

Biondi, a student of Salkowski, has noted that the proteolytic action of the liver is facilitated by the presence of acids. This difference in intensity of digestion under the two different conditions is made very conspicuous by the following table.

Out of 1 000 gms. of liver passed into solution	Experiment 1 With 0.28 HCl	Experiment 2 Without HCl
Organic substances	100.10 gms.	59.0 gms.
Ash	26.90 gms.	11.12 gms.
in nitrogenous substances	11.70 gms.	7 gms.
Albumose	Trace.	Trace.
Pepton	None.	None.

⁵ Virchow's Archiv. cxxxvi 1894

⁶ Zeitsch f phys Chem., vol xxx 1900

⁷ Jour Med Research vol. x, 1902

The conditions influencing the intensity of autolysis were studied in greater detail by Hedin and Rowland,⁸ whose investigations were made on tissue plasma obtained by Buchner's method. It was established by these writers that the self-digestion of the majority of organs is facilitated by the presence of 0.25 per cent of acetic acid and is depressed by the presence of alkalis, by calcium carbonate and magnesium oxid. The only deviation from this, according to Hedin and Rowland, is in the muscle tissue, where the intensity of digestion is not affected by the presence of alkali or acid. On the other hand, cardiac muscle is subject to the general rule of autolysis. The autolysis of nerve tissue, and of the testis also, is facilitated by the presence of acid, as was demonstrated by Stolley and myself.

These observations are important, for the reason that they make very improbable the supposition that self-digestion of tissues is caused by trypsin deposited in the organs by the blood supply. On the other hand, Salkowski, in his early work on autolysis, has noted the appearance of leucin and tyrosin, and in this respect the proteolytic action of animal tissues resembles tryptic digestion. Contradictory to this seemed the observations of Biondi.⁹ This author could not detect tryptophan in the experiments in which the absence of bacterial growth was made certain. Another peculiarity of the autolytic cleavage noted by Biondi is the comparatively insignificant formation of albumose and of peptone. Jacoby also, in his very exhaustive study on autolysis, invites special attention to the foregoing difference between tryptic and autolytic digestion. On the other hand, Jacoby demonstrated tryptophan among the products of self-digestion of tissues. Thus the chemical process of autolysis bears some resemblance to either form of digestion, peptic and tryptic, and yet is different from each of them. This alone makes it very probable that animal tissues do not borrow their power of disintegration from either gastric or pancreatic gland, and that self-digestion is one of the general properties of living or, rather, surviving organs.

Additional evidence in support of these assumptions was brought forward by Matthes.¹⁰ It is well known that urine of normal individuals contains a proteolytic enzyme resembling pepsin. Matthes demonstrated that after the removal of the stomach of dogs the enzyme ceases to be eliminated by the urine. It was natural on the basis of this experiment to view the stomach as the source of the urinary pepsin. The same method of investigation was applied by Matthes to the study of the origin of the self-digesting power of organs and tissues. Dogs were deprived of their pancreas and allowed to recover from the operation. The organs were then examined for their proteolytic power. No difference could be detected between the organs of the normal and those of the operated animal. Thus, all evidence seemed unanimously to support the view that self-digestion is a constant property of surviving tissue.

However, for the interpretation of the rôle of this function in the economy of the living organisms, it still remained to be established whether or not the process of self-disintegration takes place also in life. Jacoby¹¹ was the first to give experimental trial of the question. For this purpose he performed on dogs the following operations. The hepatic artery and the portal vein were ligated and, after several hours, the liver was extirpated and analyzed for amino-acids. Leucin and tyrosin were found to be present. Further, he

obtained the same results on ligating a part of the liver. These substances were also obtained by Jacoby from organs extirpated aseptically and kept under conditions in which contamination was impossible. It may be remarked that all these methods are open to some objections. More convincing seems to me the analysis of the developing organism. It has been known for some time, through the work of Schulze and his pupils, that in the course of germination and growth of plants, substances appear which arise also on proteolytic digestion of the seeds. I have made a similar observation on the developing egg of fish and of fowl.¹² In the course of development of the egg one can notice the breakdown of the albuminous matter and the appearance of products of the nature of nitrogenous acids.

So, at the present time, there is sufficient evidence for the assumption that disintegration or self-digestion is a constant occurrence in living as well as in surviving tissues. However, there is still a lack of information regarding the rôle of this function in the mechanism of life. In the animal tissue, organ or cell one has to distinguish two different parts, one representing the organized mechanism controlling its function, the other consisting of various organic substances stored up or deposited in the organs, as a supply of fuel material. Blood plasma and lymph, which envelop every part of the organ, are not integral parts of its tissue. They only furnish the material which the organ may or may not use. White of an egg and the greatest part of its yolk are only building material for the developing organism.

In physiology there are two views regarding the production of animal energy. One is that a substance can not be utilized by a living cell unless it has been assimilated and transferred into organized cell substance. Liebig was the author of this theory and Pflüger most vigorously defended it. On the other hand, Carl Voit claimed that in higher organisms the principal supply of fuel material is furnished to the organs by the blood. The albuminous matter carried to the organs was named by Voit "circulating proteid." Opinions on the subject are still divided and it is possible that in a way both views are correct.

Since there was some foundation for the view that the process of autolysis is the one which controls tissue disintegration, it seemed important to make clear whether or not the mechanism is capable of breaking down albuminous matter derived from other sources than that of its own body substance. The first observation in this direction was made by Theobald Smith, who noted that fresh tissues removed from the organism under aseptic conditions were capable of digesting gelatin. On the other hand, Martin Jacoby¹¹ noted that during the process of liver autolysis, of the proteids only the globulins suffered a disintegration, and in a later work he observed that the self-digesting liver was completely incapable of digesting lung tissue. Thus, on the basis of this work, one would be led to the view that the process of autolysis is incapable of causing the digestion of circulating proteid, and that the two processes are totally independent one of another. However, Hedin⁴ has shown that the spleen possesses the power to digest not only its own proteid material, but also the proteids of the blood. Thus the question still remains an open one.

PRODUCTS OF TISSUE DISINTEGRATION

The work thus far reviewed possessed primarily theoretical interest only. It aimed to elucidate the mechan-

8 Virchow's Archiv, vol. cxliv, 1900.
9 Archiv f. exp. Path. u. Pharm., vol. II, 1904.

10 Zeltsch. f. phys. Chem., vol. xxxv, 1902.
11 Zeltsch. f. phys. Chem., vol. xxx, 1900, also vol. xxxiii, 1907.

ism controlling the disintegration of tissue components in the living and in the surviving organs. Nevertheless a detailed knowledge of the products of tissue autolysis is of importance from the standpoint of practical medicine. In the human organism, as well as in that of many animals, all substances which are consumed as food and nourishment, no matter how greatly they differ in their chemical composition, are finally broken down into a few very simple bodies which are rejected by the organism through the kidneys, bile and other excretory mechanisms. Urea and carbonic acid are the two substances into which nearly all foodstuff is transformed. In a complex organism the metamorphosis is a gradual process. Before a nitrogenous substance is transformed into urea it undergoes numerous degradations. Before sugar is oxidized to carbonic acid it suffers numerous changes. Further, it is not improbable that in a very complex organism individual organs are concerned only in one definite phase of the transformation, leaving the other organs to continue and to complete the work. In his recent address on this subject Professor v. Noorden¹² pointed out that the information regarding the nature of intermediate products of metabolism, as well as the seat of their formation, is lacking. Attention of investigators has turned to the study of the products of autolysis of various organs in the hope of filling in the gap in our knowledge of the mechanism of nutrition and of self-preservation of the organism.

However, the study of the substances arising in the course of autolysis was preceded by very active work on the normal composition of tissues and tissue components. Indeed, it was to be expected that within the body tissue constituents would break down into their component parts. Recent years are marked by astonishing progress in the knowledge of the chemical nature of tissues. It was owing to this progress that the study of autolysis was made a comparatively easy matter. As already stated, the principal tissue components are albuminous matter, sugars and fat. The changes which each one of these components undergoes in the course of self-digestion has been the subject of special investigations.

Under the term proteid is generally understood the substance which represents the most important and most characteristic part of living matter. It is colloidal in nature and is composed of various nitrogenous acids. On heating proteid with strong acids or alkalis, the original substance disappears, giving rise to the nitrogenous acids. Of those already known are the following:

Glycocoll	Lysin
Alanin	Arginin
Aminovalerianic acid	Histidin
Leucin	Prolin
Glutamic acid	Tryptophan
Phenylalanin	Cystein
Tyrosin	

Of the proteids, one group attracts special attention. Its members are present in greatest quantity in the nuclei of all cells, and it has been assumed that the function of the nucleus is closely associated with the presence of these substances. They are named nucleins, nucleoproteids, nuclealbumins, etc. They are more complex than ordinary proteids containing in their molecule besides the usual constituents a body termed nucleic acid. This acid is composed of substances to

which a considerable rôle in the pathogenesis of disease has been attributed. Its components are as follows:

Phosphoric acid, carbohydrate, thymin, uracil, cytosin, adenin, guanin, hypoxanthin.

Normally, components of simple and complex proteids occur as such in tissues in very insignificant quantities. But it is found that in the course of self-digestion an organ may undergo such deep changes that nothing remains of its original structure, in its place the following substances appearing:

	Pancreas	Livor	Spleen	Kidney	Testes
Glycocoll	—	—	—	—	—
Alanin	+	+	+	+	—
Amisobutyric acid	+	+	+	+	+
Aminovalerianic acid	+	+	+	+	+
Leucin	+	+	+	+	+
Glutamic acid	+	+	+	+	+
Aspartic acid	+	+	+	+	+
Pyrrolidin carbonic	+	+	+	+	+
Tyrosin	+	+	+	+	+
Phenylalanin	+	+	+	+	+

A glance at the table shows clearly that the action of the autolytic process in organs is as powerful as that of strong acids combined with high temperature. Nearly all the products which are obtained on prolonged boiling of proteids with strong mineral acids arise also in the course of autolysis. However, there are noted some differences in the two processes. If it be allowed to name substances appearing on cleavage with mineral acid as primary cleavage products, the distinction may be made that on autolysis the primary products undergo further transformation. It is a matter of convenience to discuss the points of difference according to the three principal groups of substances in which they occur, namely: 1. The nitrogenous acids containing only one nitrogen in their molecule, monoamino-acids. 2. Acids with more than one nitrogen in the molecule (The substances of this group arising from proteid cleavage were named by Kossel hexon bases. They generally possess basic properties). 3. Substances resulting from the nuclear degradation, nuclein derivatives or nuclein bases. The most appropriate method for investigation was: First, to study the products obtainable on boiling organs with strong acids, second, to study those arising on autolysis of the same organ, and, finally, to analyze the substances appearing on boiling with strong acids of organs previously subjected to self-digestion.

On acid cleavage all the amino-acids are obtained which are known to appear on the breaking down of proteid material. Among the end-products of self-digestion of the pancreas, Emerson¹³ discovered oxyphenylethylamin, which is not known to be present in the proteid molecule, and which may be regarded as a secondary product derived from tyrosin. Further, on autolysis of various organs the formation of glycocoll was not observed, and prolin could be demonstrated only in a few experiments. It should be remarked that the present methods of analysis of amino-acids are not fully satisfactory, and too much weight should not be attached to the results thus far obtained. However the results of the analysis of the amino-acids obtained from the fresh and from the self-digested glands seem to indicate that in the course of the latter process some destruction of the substances takes place. This may be

¹² THE JOURNAL OF AMERICAN CHEMISTRY, Oct. 25, 1905.

¹³ Hofmeister's Beiträge, vol. I, 1901.

on from a table showing the results of experiments not yet published, although completed

	1 fresh spleen 5 pounds	Autolysed spleen 5 pounds
Arginine	0.700	0.700
Valerianic acid and amino valerianic acid	8.6	1.7
Leucine	5.25	5.00
Aspartic acid	11.75	12.0
Glutamic acid	7.1	0.8
Threonine	1.12	1.25
Tyrosine	1.15	1.11
	Percent	Percent (inactive)

The knowledge of the further phases of amino-acid metamorphosis is rather meager. Stollé¹⁵ has shown that amino acids exposed to the action of tissue extracts give rise to ammonia and Magnus-Lewy¹⁶ has demonstrated the formation of fatty acids in the course of autolysis. Diamino acids and other basic substances of the proteid molecule suffer a similar disintegration. Thus on prolonged autolysis of the pancreatic gland or of the gastric mucosa the formation of diamino- α -amino acids a process analogous to the transformation of tyrosine into oxyphenylthylamin, was observed by Lawrow,¹⁷ Langstein¹⁸ and by myself.¹⁹ It has also been noted that a very considerable part of the diamino acids suffers a more complete disintegration. Thus five pounds of fresh spleen yield on hydrolysis 3.2 gm of arginine and 2 gm of lysine and the same quantity of digested glands only 1.5 gm of arginine and 1.2 gm of lysine. The mechanism controlling this degradation was explained by the brilliant discovery of Kossel and Dakin.²⁰ These authors have demonstrated in various organs the presence of a special enzyme whose function it is to decompose arginine into urea and diaminovaleric acid. The same enzyme was found by Shiga in the yeast cell.

(To be continued)

IRRIGATION OF THE ABDOMINAL CAVITY

FROM A BACTERIOLOGIC STANDPOINT

J. WALTER VAUGHAN, A B, M D

DETROIT

The mortality in cases of peritonitis depends on two things—first and foremost, the virulence of the infecting germ, second and of almost equal importance, the area involved. Given the same organism, capable of forming the same toxin and the same amount of toxin, the severity of the disease will depend on the size of the abscess, i. e. the area involved. In an article by Young¹ the opinions of twenty-five of our foremost surgeons were given on the advisability of flushing out the abdominal cavity in cases of acute diffuse suppurative peritonitis, "fifteen were in favor of irrigation, while ten opposed it." Those who support irrigation claim that they wash away toxic material which would otherwise be absorbed, while those who oppose it certainly have a much better mortality record to uphold their method of treatment.

The study of bacteriology until recent years has dealt mainly with the morphology of organisms and their cultural characteristics. During the past few years, however, we have been enabled to study bacteria from the standpoint of their chemical nature, because of the fact that they have been grown and obtained in large amounts at one time. The Roux flask was the first step

toward this end, and the final result, whereby great quantities of a given germ could be harvested, as a farmer harvests his wheat, has been obtained by means of the large tanks of V. C. Vaughan. To obtain a good growth by either of these means the first and essential requirement, after the medium has been rendered sterile, is to spread a thin layer of the germ substance equally over the surface of the medium. This is done by means of water suspensions of the germ—beef-tea cultures.

The peritoneal cavity may be compared to either the Roux flask or the tank. It is a large sterile cavity under ordinary conditions, but when danger threatens in the form of perforation from appendiceal or other causes, it attempts to protect itself by the formation of adhesions, and thus limit the area wherein the germ can grow. The test-tube is formed as compared to the tank. In animal experiments, where the germ is injected directly into the peritoneal cavity, the animal invariably dies, no protecting adhesions are present and there is a general diffuse peritonitis. The peritoneal cavity has not been forewarned, a large amount of a watery suspension of the given germ has been suddenly thrust into it, and the result is inevitable. In the human body also we find many cases in which perforation takes place almost immediately after the first symptoms, the peritoneum has been unable to protect itself, no adhesions are formed, and we have what is termed acute diffuse suppurative peritonitis. Those who advocate irrigation say that they wash this infectious material out of the abdomen. In reality what do they do? They form a watery suspension of the germ present and force it to every part of the abdominal cavity, thereby causing a true general peritonitis. The test-tube or flask has been changed into the tank and the harvest will be proportionately large.

A general peritonitis, and by that I mean a condition in which all parts of the peritoneal cavity are involved, is a rare and, I believe, impossible condition unless brought about by some such method as the above. Anatomically the cavity is too well divided to permit of an infection of its entire surface through even the most rapid of perforations. The area involved will undoubtedly be large, but let us consider the adhesions formed as the advance guard of the defense, and we shall still have the natural anatomic boundaries as the reserve, when the advance has not been able to cope with the invasion. Roughly, from this standpoint, the peritoneal cavity may be divided into at least three compartments. The pelvic, that below the transverse colon, and that above, the latter of which may again be divided into two, one of which we will term the gall-bladder region and the other the perigastric. In the female the pelvic region is happily more distinctly separated from the abdomen than in the male. From the standpoint of extension of infection the sigmoid may here be regarded as the dividing line. The adhesions between the sigmoid and surrounding structures in fully 90 per cent of cases are means of preventing the infecting process from extending upward and invading the true abdominal cavity. When abscess formation fails in appendiceal or typhoid rupture the transverse colon is the natural barrier to a further extension of the process upward. Why, then, should we bathe that part of the peritoneal cavity above with a fine suspension of fecal matter and infectious material by means of irrigation? In cases of perforation of gall-bladder or perforating ulcer of either pylorus or duodenum the upper strait is involved—that above the transverse colon. No other part of the abdominal cavity has such definite barriers

15 Hofmeister's Beiträge, vol v, 1904

16 Ibid, vol II, 1902

17 Zeltisch f phys Chem, vol xxxIII, 1901

18 Amer Jour of Physiol, vol xII, 1904

19 Zeltisch f phys Chem, vols xII and xIII, 1904

1 THE JOURNAL A M A, Aug 26, 1905

MARCH 17, 1906

SURGERY OF THE OVARIES--LOBINGIER

to the extension of any infectious process as the region of the gall-bladder and pylorus E. W. Andrews² says

There is no part of the cavity which has such invariable boundaries as the gallstone surgical field. Unlike most parts, it is not subject to the floating in or intrusion of other viscera. Its surroundings, to a certain extent, shut it off and prevent it from draining into or out of the rest of the cavity. In form it is a triangle, bounded above by the liver and appendages, below by the colon and mesocolon, and to the left by the stomach, gastrohepatic omentum and duodenum. This space can also be conceived as a spherical triangle, or as a pyramid, with its base on the abdominal wall, and its apex in the foramen of Winslow.

Who now would think of carrying infectious pus over these natural bounds and into the surrounding cavity by the aid of irrigation? Yet the same rule holds good for any portion of the abdomen and is equally true of appendiceal rupture and perforations in typhoid.

The reaction caused by such great mortality following flushing of the abdominal cavity in acute diffuse suppurative peritonitis has come in the method of treatment of which Ochsner was the first and foremost advocate—absolute rest with no operative interference—thus allowing Nature to do her best. Thus after all is what the treatment consists of, and when Nature is undisturbed how does she attempt to contend with the invasion? Pathology teaches us that the local changes are first a serous exudate which later becomes fibrinous in character. This we know is the means by which the infection is walled off and abscess formation occurs. Why, then, should we wash this exudate away and thus prevent, or at least retard, such a result by means of irrigation? In the local exudate, as well as in the entire blood stream, a great increase in the number of leucocytes can always be observed, and while as yet we do not fully understand what part these leucocytes play in the resistance to infectious processes, yet we know that they play a part of much importance in the successful issue of these cases. These also are washed away when irrigation is employed. Outside of this, Nature protects with chemical substances which we term antitoxins, but we look upon these not as a local product to resist infection, but rather as a general one. However, the amount of such a substance required will vary directly with the intensity of the infection, which may be said to be governed partially by the area involved.

It is a common clinical observation that shortly after irrigation of any abdominal abscess there is a noticeable rise in the temperature of the patient. This we ascribe to increased absorption, that is, we have not only washed out the debris of dead cells, but the protecting exudates covering the peritoneal surface have also suffered and new exudates must be formed before the toxic products are again separated from direct contact with the blood stream and lymphatic channels. A given organism will soon die out if kept in the same test-tube, but if new media be constantly added or frequent transplantation take place its life may cover a greatly extended period.

Realizing then that Nature's most efficient safeguard is in the formation of adhesions and that the percentage of cases in which these cause permanent after trouble is very small let us consider how we can best aid in what Nature has failed to do. From a bacteriologic standpoint irrigation is entirely contraindicated. The surgeon will tell you when the abdomen is opened because of any infective process that drainage is the object sought. A large perforated rubber or glass tube furnishes the best means of obtaining the freest drainage and this is frequently used and with most satisfac-

tory results. However, always in conjunction with this and sometimes alone, one or more gauze drains are inserted into the abdominal cavity. This is done because clinical experience has taught the surgeon that his patient will do better and that recovery in a greater percent is assured if the gauze drain be used. Given the choice between gauze and tube drainage and, I venture to say, by far the majority of surgeons would choose the gauze, and their reason would be that clinical experience proves that the mortality is far less when this form of drain is used. Now why should this be so? To my mind the answer is found by reverting again to that second factor in the causation of the mortality, namely, the area involved. At present we have no substance which is so effectual in the stimulation and formation of adhesions as sterile gauze. The gauze drain helps Nature to build up that safeguard which she is called on to supply, and hence helps to limit the area of infection. After three or four days this drain, which has played so useful a part in the limitation of the area involved, may become an absolute menace, for when the exudate has become dried upon its surface it plays the function more of a cork than a drain. But by this time the adhesions are well formed and the tube should be substituted for the gauze, since free drainage is now the essential in order that the pressure within the abscess may be as small as possible, and thus render slight the danger of infecting that portion of the abdomen without the abscess by rupture of the same.

It is my opinion that the habit of irrigation in infectious conditions of the peritoneum is a pernicious one, absolutely without either scientific or clinical endorsement, and one which appears to be as difficult for the general surgeon to give up as anterior suspension or fixation has been for some gynecologists. Many of the leading surgeons have abandoned irrigation in peritonitis from appendiceal trouble, it is true, and their results alone should cause others to follow in their steps. Why should the same principle not be adopted in typhoid perforation, and, indeed, perforations from all other causes? I believe that if such a course were to be adopted the present mortality would be markedly reduced.

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THE CONSERVATIVE SURGERY OF THE TUBES AND OVARIES *

ANDREW STEWART LOBINGIER, A B, M.D.
LOS ANGELES

It is twenty years since Schroder first advocated the preservation of the remnant of normal ovarian substance in excision of small cysts of the ovary. August Martin, about the same time, reported a number of cases in which normal portions of the tube and ovary were preserved and the degenerated portion removed. W. M. Polk a year or two later presented the same subject to the American profession and submitted his brilliant results in the conservation of these structures. Since that time contributions have been made to this field of work by Dudley, Kelley, Morris and others, showing definite results in relieving pain, establishing normal menstrual function, and, in a number of instances, being rewarded by seeing the patient bear children.

There could be slight excuse for calling attention at

* Read before the San Bernardino (Cal.) County Medical Association

this late day to the many ingenious procedures for the partial restitution and preservation of these structures so vital to the happiness and well-being of women, were it not a fact that these possibilities are still grossly and continually disregarded. There is scarcely a week passes without the painful evidence of some patient suffering a loss, to her irreparable, of either one or both ovaries and tubes ablated for ovarian neuralgia, hydro-salpinx, obliterating salpingitis, or worse than all possibly, simple ovarian cyst with minor adhesions.

The mental distress which overcomes these unfortunate subjects in the sudden and artificial induction of the menopause, the deprivation of the possibilities of motherhood, the definite belief that they are to become shattered and to lose those delicate and essential elements which distinguish their sex—these realities and fears are sufficient in themselves to cause any surgeon to reflect on his responsibilities. And no one of even moderate experience will question the frequency of the appalling consequences of this crude and wretched work.

The prevalence of long obsolete procedures in surgical technic is no fault of our masters, who have filled the literature of every language with a modern gospel which is free to all of us. The fault is ours and lies stark and accusing at our own threshold. We are not guiltless, if in our apathy we have not harkened to good teaching nor heeded the warning for him whose crass ignorance shall cause innocent ones to suffer through long and helpless years.

Improvement in this field of work is to be looked for in a more patient and careful study of the pathology of ovarian and tubal disease. It is necessary to get away from the fads which have misled us and drawn us unthinkingly after false teachers, who would find in the extirpation of a vital and essential organ the relief from a painful symptom. It is necessary to distinguish between surgical procedures which are mutilating and those which are conserving and remedial. Only by thoughtful and studious consideration of the physiology and physiologic chemistry of these structures and the relative degrees of existing pathologic change can one found a judgment which has enduring value.

The wild claims of the advocates of Batley's operation are fresh in the minds of all of us. Many, if not most of us, I daresay, have been blind followers of the blind in this grievously erratic doctrine. We can atone for these errors only by a persistently earnest effort to analyze our cases with greater conscience and precision, and to choose a surgical procedure which will the most perfectly restore the organ to its normal function.

It is beyond the limits of this paper to discuss the multiform influences contributing to disease of the pelvic organs. Outside of the violences of incorrect diet, bathing, clothing, exercise and social dissipation, there is that great trinity—septic metritis, gonorrhea and tuberculosis—which forms the sum total of concrete disease of the tubes and ovaries.

It may well be said at this juncture that any and all of these conditions might be prevented, and that it were more philosophic to deal at length with measures looking to the prevention of these potent infections than to efforts to preserve the shattered remnants of their destructive work. We need have no quarrel with the sanity of this idea, and preventive medicine has no fairer field for its cleverest effort, but the surgeon is still the latest to be called and is confronted by a complicated pathology which admits of but one appeal.

CONSERVATION OF THE OVARIES

This discussion need not deal with those large ovarian

cysts, now so rarely met, in which all ovarian substance has perished, nor with extensive dermoids, hematomata, parovarian cysts or that extremely rare neoplasm, fibroma of the ovary. Carcinoma, tuberculosis and abscess call for the total extirpation of the affected ovary and, in the first two, frequently of the uterus and adnexa. It is possible, however, to save an ovary partially destroyed by a small abscess. It is just as rational and defensible as to spare the parotid, mammary gland or testicle under like circumstances.

The commonest affection of the ovary calling for surgical relief is the small cyst. These cysts usually occur in numbers and they vary greatly in size. They may be pseudo-retention cysts—unruptured Graffian follicles—or true cystic degenerations of the corpora lutea. In any case they add a preternatural weight and create a tension in the tunica albuginea which results in a dragging burning weight and in so-called ovarian neuralgia. I have seen many cases in which this excessive weight threw the uterus backward out of its normal axis and held it tight against the rectum in the hollow of the sacrum. Often these large cystic ovaries become imprisoned deep down in the cul-de-sac of Douglas, acting like spherical valves, the force of whose suction not only keeps the vessels in the tube, ovary and broad ligament congested, but produces and maintains a dorsal version which is both painful and obstructive. In almost every instance the tunic will be found greatly thickened, causing ovulation and the menstrual period to be very painful.

A great deal was said in former years concerning the "cirrhotic" ovary. We know now that this is a myth and that what was designated ovarian "cirrhosis" was nothing more than a somewhat distinctly defined collection of the scars of ruptured follicles. No doubt there are women in whom the ovaries show a tendency to contract and, through the physiologic process of ovulation, to lose parenchyma which relatively gives the appearance of increase of stroma. That condition, however, is no more pathologic nor is it more frequent than the hypertrophic ovary which I have met repeatedly and which in some cases I have observed to be twice the size of the normal organ. Microscopic examination shows a relative increase in the reticulum in the one case, in the parenchyma in the other. Neither condition is pathologic, although I have found that removal of at least half of the hypertrophied ovary gives immediate relief from the weight and burning. Many so-called cirrhotic ovaries are doubtless the remnants of previous small ovarian abscesses or the result of adhesive bands from septic inflammation of the uterus and tubes. In these cases the irritating scar may be resected and the normal portion of the ovary left, and this may be laid down as the rational surgical procedure in every instance of ovarian pathology, save the exceptions heretofore mentioned. It may be stated dogmatically that oophorectomy, except in this restricted sense, is not only obsolete, but that it is utterly wrong and unjustifiable, and this doctrine will apply to at least 90 per cent of all pathologic ovaries.

The technic of excision of the cysts and degenerated portions of the ovary is not difficult, but calls for nice dissection and delicate suturing with fine plain catgut. It will be found that in many instances the walls of these cysts can be peeled out with fine dissecting forceps as soon as the tunic is incised. The incision should pass through the superior edge in the long axis of the organ and it will be found that at the base there is much ovarian tissue which is absolutely normal.

I can recall many patients operated on for tuberculosis or for septic destruction of both tubes and apparently of both ovaries, in whom it was possible to leave ovarian substance at the base of one or both ovaries not larger than an olive seed. These women all began to menstruate at periods varying from two to six months after the operation and with but slight irregularity. There has not been one of them in whom this function has been effaced, and within a year all of them became as regular as the average normal woman.

In one case of caseous destruction of the entire left tube and ovary and of the right tube, and all but the submerged base of the right ovary, from tuberculosis it was possible to save the merest portion of the base of the right ovary. This patient has had irregular, and at times, suppressed menstruation for fifteen years and has also suffered from pulmonary tuberculosis. Before the operation she menstruated irregularly at intervals of from two to four months. After her operation there was no sign of return of the period, except a headache from congestion, for three months. She then flowed slightly for a day and a half, but not until the sixth month was the menstruation fully re-established, even then it was attended by some pain. Now, two and a half years later, menstruation occurs regularly, lasts three days, and gives as little discomfort as is usual in normal women.

In a number of other patients the destruction of the ovary has been less than in this case and the re-establishment of the menstrual function has been relatively earlier and less eventful. In a still larger class of patients one of the ovaries may be almost or quite totally destroyed and the other partially or wholly normal. In such the excision of the diseased tissue leaves no incident of note in the perfectly normal menstrual cycle.

Ovarian grafting in young women who have previously been subjected to ovariectomy is still in the experimental stage. Knauer's experiments on rabbits in 1896 showed that autotransplantation of an excised ovary within the broad ligament resulted in continuance of ovulation. Hetero-transplantation has resulted in degeneration of the ovary thus transferred from one animal to another. In a recent contribution by Robert T. Morris, comprising a résumé of the latest work in this field, including his own, these conclusions are drawn:

1 When the ovaries are removed from an animal and then replaced at some point near their original site or even at distant points, the tendency is for the ovary to continue its function of developing ova and of furnishing its internal secretion. Such transplanted ovaries may continue to do normal work for an indefinite period.

2 When ovaries are removed from one animal and transplanted into another animal of the same kind which has had the ovaries removed, the tendency is for the grafted ovary to undergo a degenerative process. The graft will continue to furnish ova and internal secretion for several months in some cases, but at the end of a year we often find the grafts fatty and apparently useless. We assume that the serum of one animal is destructive to the introduced tissues of another animal of the same sort. My present line of investigation is toward making one series of rabbits immune against the serum of another series and then exchanging the ovaries of the two series. If this can be accomplished, ovarian grafting will be placed on a plane of usefulness much above its present one.

As the possibilities of conservative surgery on the ovaries are better understood we shall have fewer subjects requiring transplantation. In fact it is simply the substitution of a rational artistic technique for a crude and ruthless sacrifice of vital structures.

CONSERVATION OF THE TUBES

In the uterine tube we have a structure which in both its histologic and anatomic characters becomes at once a more complex problem than the ovary. Partly on account of this involved pathology the ovary has frequently been sacrificed with the diseased tube. This practice has doubtless grown from the fallacy that if the tube be partially or hopelessly destroyed the ovary is likewise in a hopeless condition and should be removed also. No more pernicious doctrine than this could prevail. Each organ must be considered and treated with regard to its own pathology, and the fact that certain organs are anatomically contiguous and may be closely related by blood and lymph currents and nerve supply is by no means just cause for sacrificing both organs when but one is diseased. There are many mild infections outside of the strictly pyogenic, gonorrheal or tuberculous that may cause the lumen of a tube to become obliterated. I have often found the isthmus constricted and the *ostium abdominale* partially closed in young unmarried women, with neither a history nor pathologic evidence that any infection, however mild and innocent, could have occurred. Yet at some time when the uterine mucosa was most susceptible a slight endometritis had extended to the tubal lining and through successive attacks had produced the hyperplasia necessary to cause occlusion.

There is also good reason for the belief that bacteria from the appendix on the right and from the epiploic processes of the sigmoid on the left have been definite factors in the closure of the ampulla at the fimbriated extremity. Whatever the etiology of these milder infections, on account of which the tube ceases to be patulous, we have in this obstruction a cause of sterility as actual and permanent, until relieved surgically, as from a septic or gonorrheal infection. And it should be remembered that fully a third of the patients in private practice presenting themselves for relief from sterility are suffering from the results of these milder infections. The frankly septic and gonorrheal infections very naturally cause the most destructive and complex deformities of the tubes and call for a correspondingly radical treatment. Fortunately for the operator, unfortunately for the fate of the tube, the best practice that is now known to us is to await the subsidence of the acute process before surgical interference is justifiable. Whether we shall ever venture as a rule of practice to treat these abscesses early before extensive destruction of the tube occurs is doubtful.

A better understanding of the means of arresting the infection before it passes in any degree beyond the uterine mucosa is necessary. This gained, the conditions in the tube will be found more amenable to early cleansing and drainage and by so much the early treatment of sub-acute septic and specific infections of the tube will be practicable. Even as it is one is continually surprised to see how remarkably well these extensive infections clear up and leave tubes which seem hopelessly deformed, astonishingly free from evidences of damaging inflammation. It may be necessary to do more than one operation on these structures. It will always be necessary to apply the most discriminating judgment and careful technic in regard to the incision, the matter of drainage and in arriving at a decision as to what portion, if any, may safely be removed. Yet it is most gratifying to find in how many instances the surgeon is well rewarded for the care and pains taken to save his patient these priceless structures.

In tuberculosis—an infection of the tube which we

are identifying far more frequently than heretofore—little is yet can be offered of a conservative character. Theoretically there should be no justification for sacrificing an apparently sound ovary or tube. If one is infected and the other not it would seem to be reasonable practice to leave the sound tube, even though a later infection should occur and a second operation be necessary. This doctrine would be beyond controversy did we actually know that the endometrium and the lining of the sound tube were uninfected. In the light of our present methods, however, we can not know, and hence we must be guided by clinical experience, this has taught us that when one tube becomes manifestly tuberculous infection of the other is almost inevitable and that in this infection the uterus is frequently first. With this pathology we now know but one safe course of action—total extirpation. The future should hold something better than this.

The technique in tubal surgery must depend largely on the character and degree of infection and the extent of destruction and deformity. In simple stricture at the isthmus, resection of the isthmus and the anastomosis of the ampulla with the proximal end of the tube near the cornu offers good results. A cord of heavy plaited silk should be anchored in the ovary and the other end carried down through the uterine cavity to a gutta percha bobbin in the vagina to insure the mucous tract remaining patulous during the repair of the anastomosis. I have known pregnancy to occur within three months following this procedure.

When the mouth of the tube has closed by a sealing over of the processes of the fimbria the adhesions, which are usually thin and delicate, should be opened up, the cavity of the ampulla carefully syringed out with salt solution and the edges of the released fimbria folded back over the tube like a cuff and tacked there with interrupted stitches of fine catgut.

When the tube is angulated or kinked by fine dense bands these should be snipped and the tube straightened out, and if a stricture persists the dorsum of the tube should be laid open and the lumen given the usual toilet. Attempts to probe the tube are usually so fruitless that such injury as is sure to result should be avoided. Careful syringing with salt solution in a fine syringe is far safer and more effective.

In tubes which have been septic or gonorrheal and in which active cocci no longer exist, or in mild types of hydrosalpinx, the occluded tube should be opened up, cleansed and the cystic portion utilized as an ampulla. If perfectly free from infective material the dorsum of the obliterated portion of the tube may be laid open and a silk cord passed downward as in the case of anastomosis already described. Frequently these tubes will be found patulous just proximal to the barrier of the cyst wall and the incision may cease a line or two beyond it.

When the tubes are large pus sacs it has been customary to remove them and, commonly, the uterus. It remains to be seen if we shall not be able to do better than this by carefully and properly applied drainage in a series of operations. It can not be denied that so far little of merit in this direction has been recorded, yet if we were to quail at a septic tendovaginitis in the hand and wrist, as we do at conserving pus tubes in the pelvis, what a melancholy showing we should have. Possibly a little more patience, a little more plodding, a little more dogged belief in Nature's regenerative power when nicely and intelligently aided, would be rewarded here as elsewhere, in fields more difficult but not more worthy.

What has been said of preserving the tube when impaired by infection will apply with equal force to tubes changed by ectopic pregnancy. A tube should never be sacrificed if it is possible to save it or even a portion of it, for the normal one may suffer soon in like manner and both thus perish.

In every instance of conservative work on the tubes and ovaries the uterine cavity should be thoroughly curetted and cleansed, since it may be necessary to establish and maintain communication for several weeks between the abdominal cavity and vagina through the uterine canal. That this can be done with perfect safety has been repeatedly proved, but the price is strict asepsis, both as to the sterility and toilet of the tubes and after toilet of the vagina.

It will often be found necessary to shorten the uterine round ligaments to correct version and descent, and this should not be overlooked.

The results of value in a certain procedure are the end results. I know of none more positive or beneficent than in this field, provided careful judgment and attention to minute detail is faithfully observed. My hopes will be more than realized if this paper shall serve to revive a just interest in a field by no means worked out and one in which conservatism will be of much benefit to the race.

THE VALUE OF ALCOHOL IN CARBOLIC ACID POISONING

A CLINICAL AND EXPERIMENTAL STUDY *

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1 INTRODUCTION

The use of alcohol as an antidote in carbolic acid poisoning was first brought before the medical profession by Dr Seneca D Powell of New York City. At his clinical lectures, from about 1894 on, he was in the habit of demonstrating his theory by such an experiment as washing his hands in pure carbolic acid and then in alcohol, and had even filled his mouth with the pure acid, and by quickly rinsing it with 95 per cent pure alcohol had experienced no harmful results. From these experiments he made the statement that alcohol is an antidote to carbolic acid, and suggested its being used internally in cases of poisoning. The results of his five years experience were reported to the Medical Society of the County of New York Feb 27, 1899, and appeared in the reports of this society.¹ He, however, had had no practical experience in poisoning cases and goes no further than to mention a case of which he had heard of a one-month-old infant, who, after swallowing the strong acid, had been given a teaspoonful of whisky, though apparently moribund, and had recovered temporarily. Furthermore, this child, having died eight days later of pneumonia, showed no signs of an eschar in the stomach.

The first mention of alcohol as an antidote from a clinical standpoint is in the report by Donald B Fraser² of a patient who took an ounce of the pure acid in a glass of whisky, and, though unconscious for eight hours,

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¹ Powell, Medical Record, New York 1899 vol iv p 372

² Fraser Ibid, 1899, vol xlviii p 741

eventually recovered, repeated lavage with water having been resorted to. He then states that alcohol is apparently a true antidote in carbolic acid poisoning. Whether the author was familiar with Powell's work, at that time unpublished, he does not state.

The credit of first using alcohol in poisoning cases seems to be due to Dr J. Drysdale Buchanan,³ who used lavage with two quarts of 35 per cent alcohol for a patient who had taken one ounce of the acid.

Since these early reports there have been a number of isolated cases in the literature from which the most positive conclusions have been drawn. For example, Kelly⁴ in 1899, after reporting one successful case, states that "alcohol is undoubtedly the best antidote for all cases of carbolic acid poisoning, and, indeed, is an absolute antidote." Phelps,⁵ on the strength of Powell's work, says "In cases of carbolic acid poisoning, if immediately after the administration of the poison, alcohol was thrown into the stomach the poisonous effects of the carbolic acid would at once be neutralized." Pinkney,⁶ after reporting a fatal case, says "The amount of carbolic acid left in the stomach and intestines when alcohol came in contact with it was rendered harmless, and the general action of the already absorbed poison was checked immediately." Finally, Gross,⁷ in discussing the subject, refers to alcohol as a chemical antidote, and says that the reaction forms "a new phenol benzine or aromatic compound having the chemical and therapeutic properties of alcohol."

Two years ago one of us, having been favorably impressed by some of these reports and by good results obtained by the use of alcohol by himself, and other members of the staff of the Johns Hopkins Hospital, in cases of carbolic acid poisoning, introduced the use of alcohol in the emergency room of the Lakeside Hospital. Since that time thirteen patients with carbolic acid poisoning have been admitted to the hospital, for all of whom the alcohol treatment has been used.

2 CLINICAL DATA

BY T. W. CLARKE.

As all former reports on this treatment have been of single cases, from which, owing to the natural tendency of the profession to report their successful cases only, but slight conclusions can be drawn, it has seemed advisable to report the present series of thirteen cases more or less in full. For permission to use these cases we wish to thank Drs. Hunter Powell, John H. Lowman, Henry I. Upson and Edward F. Cushing, visiting physicians to the Lakeside Hospital.

CASE 1.—Patient admitted at 8 p. m. Dec. 14, 1903, unconscious. Had taken carbolic acid, 5ss, in whisky. There were two burns on chin. Pupils react, breathing heavily. Pulse was so rapid and weak that it could not be counted. Stomach was washed out with two quarts alcohol, 10 per cent, then milk and eggs. Oil left in stomach. Strychnin, 1/30 gr, digitalin 1/30 gr given hypodermically. At 9 p. m. patient was conscious and very noisy, quieted with sodium bromid and chloral in rectum, and slept the rest of the night. Temp 100, pulse 110, at midnight.

December 15. Some pain on swallowing. Nothing to be seen on examination of the throat and mouth. Temp 99 to 101, pulse 80 resp 20 urine dark.

December 16. Patient allowed up in wheel chair. Still

slight soreness on swallowing. Physical examination negative. Temp normal, pulse 70 to 80, respirations 20 to 26. December 18. Eats well, no difficulty in swallowing. Scar on chin disappearing. Discharged, well.

CASE 2.—Patient admitted 11 a. m. Jan 17, 1904, having taken carbolic acid, 5ss, shortly before, in glass of beer. Patient was unconscious. Pulse arrhythmic, rate 160. No burns on lips, slight erosion on cheeks. Lavage performed with alcohol, 10 per cent. The washing contained carbolic acid and much undigested food. Milk and eggs, Oil, added and left in. Artificial respiration was resorted to several times. Strychnin, 1/20 gr, and digitalin, 1/30 gr, were given twice in quick succession. Temp 98.4, resp 58, pulse 160. At 1 30 p. m. the pulse and respiration became most irregular. Strychnin, 1/20 gr, and digitalin, 1/30 gr, steadied both. Hot water bottles were applied and coffee, 5vin, given *per rectum*. At 3 p. m. subcutaneous infusion of normal saline, 600 c.c., was given and repeated at 7 p. m., the last containing 7 gm sodium sulphate. Patient vomited frequently between 4 and 5 45. Patient first showed consciousness at 7 p. m. while the infusion was being given.

January 18. Patient is doing well. Temp 100.5 to 101, pulse 100 to 110, resp 30 to 40. The patient looks well and seems but little the worse for her experience. Urine black, slight trace of albumin, no blood, no casts.

January 19. Last night the patient's temperature rapidly rose, and this morning was 105, resp 70 and pulse 160. Leucocytes, 5,000. The patient is very cyanotic. Sponge baths, strychnin and oxygen ordered. Examination of chest is negative. Urine yellow, heavy trace of albumin, no blood, no casts.

January 20. The temperature has remained in the neighborhood of 105, pulse 150 to 170, resp 60 to 65. To day there is a definite pneumonia area over right upper lobe. Over the entire chest there are patches of tubular breathing and large mucous rales. Patient died at 10 30 a. m.

Autopsy showed an aspiration bronchopneumonia and a small, irregular, dark colored patch in the fundus of the stomach.

CASE 3.—Patient admitted March 4, 1904, 9 p. m. Walked in, said he had drunk three glasses of whisky and then carbolic acid (doubtful quantity). Was quite conscious and rational. On left side of mouth and lower jaw were acid burns. Inside of mouth and pharynx slightly burned. Respirations normal, 28, pulse good, 100 a minute, temperature normal. Stomach was washed with 10 per cent alcohol, and water, and sent to ward. He showed practically no constitutional symptoms, slept all night after 1 30, pulse 98 to 104, but of good quality. The next day the inside of patient's mouth was blistered. Discharged, cured.

CASE 4.—Patient admitted May 9, 1904, 12 10 a. m. Brought in in ambulance in a delirious condition. Had been drinking and had then taken carbolic acid, 5i. Pulse fairly good quality, 100 per minute. Some burns about the lips. The stomach tube was passed and food particles removed, smelling strongly of phenol. Lavage with 10 per cent alcohol solution and followed with water. Milk, Oil, and 4 eggs inserted and left in stomach. Patient was given sodium bromid, 25 gr, and slept until morning. Temp 98.6, pulse 100, resp 24. The urine the next morning was black, contained a faint trace of albumin and a few hyaline casts, sp gr 1038. The next morning patient appeared well, slight eschar on lips, nothing to be seen in throat, some epigastric tenderness. Patient was kept in the ward until May 15 and then discharged, well.

CASE 5.—Patient admitted 5 20 p. m. July 22, 1904. She had been drinking for five days, and at 5 p. m. of the day of admission drank 10 cents' worth of carbolic acid (5i), with suicidal intent. She was taken into a saloon and became unconscious. On admission she was unconscious, cyanotic, breathing heavily, a great deal of mucus protruding from the mouth, vomiting a little. Pulse rapid and small. The face, mouth and pharynx were badly burned. Temp 98, pulse 120, resp 30. The stomach contents showed carbolic acid. Lavage with 10 per cent alcohol, followed by water, and milk and eggs left in place. She was unconscious after reaching the ward, but regained consciousness at 8 20 p. m. Patient dozed

³ Buchanan, H.D., 1899, vol. lvi, p. 241.

⁴ Kelly, Mercas Archiver, 1899, p. 441.

⁵ Phelps, New York Med Jour., 1899, vol. lxi, p. 62.

⁶ Pinkney, Amer Med., 1901, vol. i, p. 378.

⁷ Gross, Fort Wayne Med. Jour. Mag., 1899, p. 73.

all night waking several times to vomit mucus. The temperature remained elevated for several days, 100 to 101 July 23, 99.5 to 100.5 July 24, 99 to 100 July 25, 26 and 27. The pulse remained at 120 until noon July 24 and then gradually came down to 100 that night, and was 50 on July 26. The respiration from 20 to 30 the first day, 20 after that. The urine was never obtained clear, but contained a heavy trace of albumin and many hyalin and granular casts. The leucocyte count the day of admission was 18,400, reds 1,220,000, and hemoglobin 95 per cent. Patient discharged on July 27. Her skin on her face very sore and showed some signs of chelation. Temperature was 99.

CASE 6—Patient admitted 2:30 a. m. July 26, 1904. Had taken one ounce of carbolic acid in a glass of whiskey. Became unconscious in five minutes, and was sent immediately to the hospital. On admission was unconscious, no sign of burns about mouth or lips, breathing stertorously, pupils small, pulse small, 120 a minute, no vomiting. Lavage with alcohol, 10 per cent, followed with water, after washing, milk and 5 per cent sodium sulphate 5i, were put in through tube. Patient became conscious at 5 a. m. Recovery was uneventful. The urine was dark brown acid sp gr 1014, and contained a few hyalin and granular casts. On admission temperature was 97 and rose to 100.2 at 8 a. m., then gradually came down to 99 July 28. Pulse on admission was 118, at night 100, and 70 on the night of July 27. Respirations 32 on admission, at noon 14 and after this 18 to 20. The leucocyte count the morning of admission was 19,500. Patient did well and was discharged July 28, well.

CASE 7—Patient admitted 8:30 a. m. Sept 14, 1904. Had taken carbolic acid, 5i. She was unconscious, tongue and lips slightly burned, very weak, cyanosed, breathing stertorously, pupils much contracted. Pulse barely perceptible, quite irregular, 110 a minute. Stomach tube passed and contents showed carbolic acid. Lavage with alcohol, 10 per cent, and then water, eggs, milk and sodium sulphate, 5i, by tube. Strychnin 1/30, and digitalin, 1/30, given twice within an hour. Intravenous injection of soda sulphate, 2 per cent, 250 cc. Patient became conscious in two hours. In the afternoon had severe vomiting spell, which was relieved by dilute hydrocyanic acid, 4 minims, and bismuth subnitrate, 10 gr. On admission temperature was 99, pulse 112 and resp 30. Temperature went up to 100 that night, and then down to normal the following evening. The pulse remained at 110 for 24 hours, and then dropped to 80 and remained in that neighborhood, with occasional flare ups. Respiration came down gradually from 30 to 20 in 3 days. The urine was pale, sp gr 1020, faint trace of albumin, and a very few hyalin casts. Patient suffered considerably from soreness of the mouth and had very little pain in the stomach. No vomiting after the first day. Discharged, well, Sept 19.

CASE 8—Patient admitted Feb 28, 1905. Child, aged 19 months, swallowed an unknown quantity of 95 per cent carbolic acid three hours before admission. Seen by a physician at the home five minutes later, who washed stomach with alcohol and water. Patient was unconscious when seen at that time. On admission was very drowsy, temperature 101.5, pulse 160. Tongue, pharynx and inside of cheeks very badly burned, white in color. On admission patient was given magnesium sulphate, 5i, and strychnin, gr 1/250. March 1, temp 104, pulse 152, resp 40. March 2, temp 100, pulse 100, resp 20. From then on the temperature varied from normal to 100, pulse from 100 to 150 and respirations from 25 to 30. The child did well, and on March 6, the mouth having healed, patient was discharged.

CASE 9—Patient admitted on March 23, 1905. The history was that she apparently fainted in an elevator, and poisoning was not suspected for one and a half hours. On admission she was moribund, unconscious, cyanotic, resp 36, pulse small and weak, 160, pupils dilated, faint trace of carbolic to breath, mucous membranes, gums and palate white. Patient was stimulated with strychnin, 1/20 gr, digitalin, 1/30 gr, and stomach washed with alcohol, 10 per cent, and eggs and milk and magnesium sulphate, 5i, left in the stomach, 500 cc. Soda sulphate, 2 per cent solution, given intravenously. Pa-

tient never rallied and died half an hour after reaching the ward.

CASE 10—Patient admitted May 5, 1905, in an unconscious condition. Had taken carbolic acid, time not known. Severe burns of the cheek, corner of mouth, lips, tongue and roof of mouth. Pulse weak and rapid. Stimulated with strychnin and digitalin. Stomach washed with 10 per cent alcohol and water. Eggs and milk, magnesium sulphate, 5i, and sodium sulphate, 5ss, inserted through tube. Temp 100, pulse 110, resp 20. Patient was restless after getting to ward, but later slept. Temperature during the day rose to 100.8 and pulse 120, but on the second day temperature became normal and pulse 80. The leucocytes on May 5 were 28,200. Patient had difficulty in swallowing and considerable epigastric tenderness.

On May 7 patient felt well except for the burns on the face, and insisted on going home.

CASE 11—Patient admitted, unconscious, 9:30 p. m. June 1, 1905. Had taken carbolic acid, 5i, a few minutes before. Two scars, 4 cm long, on upper lip, slightly cyanotic, pulse good. Lavage, 10 per cent alcohol, then magnesium sulphate and eggs and milk by stomach tube. No stimulation. Consciousness returned 10:30 p. m. Next day scars marked on lip and slight on roof of mouth and tongue. Large white patch on right tonsil and posterior wall of pharynx. Larynx inflamed, abdomen rigid and sensitive in upper half. Blood examination. Leucocytes, 11,800, hemoglobin, 83 per cent, fresh blood normal. Urine greenish, sp gr 1020, acid, loaded with hyalin, granular and leucocyte casts. June 4 and 5. Urine, sp gr 1015, neutral, no casts. June 5. Discharged, well.

CASE 12—Patient admitted 3:30 p. m. Sept 7, 1905. Had taken carbolic acid, 5i diluted with a little water, fifteen minutes before. She had not swallowed all, as the glass was knocked from her hand after two swallows.

Patient was comatose, cyanotic. Pupils at first dilated and then pinpoint. Pulse very weak. There were two scars on the lips and the entire mouth and tongue was whitened, on the chest and abdomen was very extensive burn, extending from the neck to the pubes. The treatment consisted of lavage with 10 per cent alcohol and the introduction of yolk of eggs and sodium sulphate 5i. Strychnin 1/20 gr and digitalin 1/20 gr were given hypodermically. The patient regained consciousness in two hours and was quite violent for a short time, then quieting down. The next day the urine was of the characteristic brown black color sp gr 1005, for three days contained a few hyaline and granular casts, after this it was normal. The temperature remained slightly elevated for five days, 99 to 101.5. For two days there was some pain in the mouth, especially on swallowing. By the fifth day the mouth had cleared up, but the skin burn was still very sore, red and blistered. The patient was discharged well on the ninth day.

CASE 13—Patient admitted 8 a. m. Sept 14, 1905. Had taken carbolic acid 5i in water fifteen minutes before admission. Semi-conscious, cyanotic on admission. Burns on lips and tongue. Lavage with alcohol 10 per cent. Magnesia sulphate 5i, two eggs and milk by tube. Strychnin 1/20 gr, digitalin 1/25 gr hypodermically. Temperature 100, pulse 98, next day pulse and temperature normal. Discharged well September 16.

An analysis of the preceding cases shows several interesting features. The local effect on the mouth is greater if the acid is taken pure or in water than if taken in alcohol, all ten cases of the first class showing local eschars, whereas two of the three of the latter class showed no burns whatever. All the cases were unconscious on admission, except two who had taken the drug after drinking whisky and one who had taken it in water. This includes the cases which had taken the poison in whisky and beer. The longest period of unconsciousness occurred in the patient who had taken the acid in beer. The average period of unconsciousness of the cases having taken the drug in alcohol was three and three-quarters hours and of those in which no such history was obtained was one and three-quarters hours.

The mortality record was low, only two of the thirteen cases having died, one of these from bronchopneumonia a few days afterward, probably due to an inhalation of material during the lavage, which was performed with difficulty, and the other having been admitted moribund after having been kept for two hours outside without treatment. The treatment in all the cases consisted in a most thorough lavage with 10 per cent alcohol and in the later few cases this was followed by lavage with plain water. In eleven of the cases milk and eggs were introduced through the tube and left in the stomach. Sodium sulphate was administered through the tube in three cases and intravenously in three cases and magnesium sulphate in the stomach in four cases. Stimulation with strychnin and digitalin was resorted to in eight cases.

CASES TREATED WITHOUT ALCOHOL

A study of the records of the fourteen cases of carbolic acid poisoning treated at the Lakeside Hospital previous to the introduction of the use of alcohol in treatment surprised the authors by their similarity to their own results. In this series of fourteen, all of which were treated by thorough lavage, either with plain water or a solution of magnesium sulphate, there were only three deaths, two of these due to pneumonia and the third a case admitted ten hours after taking two ounces of the acid, an emetic of magnesium sulphate having been resorted to, but no lavage performed. In this early series also the cases which had taken the poison in alcoholic beverages seemed to show a greater tendency to unconsciousness than those that had taken it pure or in water. In the ten cases in which the record was made as to the manner in which it was taken, five took it with alcohol and five either pure or in water. Of the five alcoholic cases four were unconscious and one semi-conscious, while of the five that had not used alcohol two were unconscious, one semi-conscious and two conscious.

CASES COLLECTED FROM THE LITERATURE

The following cases have been collected from literature, and though many of the reports are too meager for any conclusions to be drawn from them, they are inserted that the reader may see the various ways in which alcohol has been used in carbolic acid poisoning in recent years. It will be noticed that they are all of isolated cases.

In these cases the following abbreviations will be used

- S and A Sex and age
- P Amount of poison and how administered
- T Time elapsed before treatment.
- L. Local eschare
- Sv Symptoms
- Tr Treatment
- C Time elapsed before consciousness returned
- A After history
- R Results

CASE 1—Fraser, 1895 S female R. phenol, 3i, in whisky T 15 min L. none Sv coma Tr atropin hypo lavage C 8 hours A. vomited 24 hours R. well

CASE 2—Buchanan, 1899 S and A. female, 35 P phenol, 3i T short Tr sodium sulphate hypodermic, lavage with 2 quarts of 35 per cent. alcohol R. well

CASE 3—Adams, 1899 S and A. female, 36 Tr alcohol 1 pint, by mouth, alcohol, 3iv, and whisky, 2iv, q 15 min Six doses whisky, 3ii q h 8 doses R. well

CASE 4—Kellie, 1899 A 21 months P phenol, 3i. T 6 min Tr olive oil Alcohol 3vi Apomorphin, 1/30 gr Whisky, 3i, q 10 min Eight doses C 30 min R. well

CASE 5—Klein, 1900 S and A female, 29 P phenol,

3ii Tr alcohol, 3iv, by mouth q ½ hours, 4 doses, then 3i q 1 hour, 4 doses Morphia, ¼ gr R. well

CASE 6—Rodman,¹⁰ 1900 S and A female, 60 P phenol, 3ii, pure T short L lips and tongue Sy coma, cyanosis, subnormal temperature. Tr alcohol, 3iv, into pharynx, then lavage with warm water and then with dilute alcohol A temperature for 2 days, 101 to 102 R. well

CASE 7—Pinkney,⁸ 1901 S and A female, 3½ years P phenol, 3iv T ½ hour L lips and chin Sy coma, cyanosis, thready pulse Tr alcohol, 3iiss Strychnin, hypodermic, 1/30 gr Infusion normal saline, 1 pint C 7 hours A temperature rose rapidly to 106 R. death in 12 hours

CASE 8—Gries,¹¹ 1901 S and A. female, 3 Sy coma, weak pulse, cyanosis, appeared moribund Tr Hypodermic of ether Magnesium sulphate, 1½ quarts, by stomach tube, then lavage with 20 per cent whisky and 3iv left in Atropin, 1/200 gr Strychnin, 1/40 gr, hypodermic C few hours R. well

CASE 9—McDonald,¹² 1902 P phenol, 3i T 25 min Sy collapse, coma Tr stomach tube, alcohol, 0i left in a few minutes and siphoned off This repeated once Then lavage with water, whisky, 3iv, nitroglycerin, 1/100 gr, strychnin, 1/20 C six hours R. well

CASE 10—King,¹³ 1902 S and A. female, 33 P phenol, 3ss 3 min Tr alcohol, 0ss Then lavage with water, repeated Alcohol, 3ii, left in. C 4 hours R. well

CASE 11—Marshall,¹⁴ 1903 S and A. male, 74 P phenol, 3i, and olive oil, 3iv, per rectum T immediate Sy coma, pulseless Tr irrigation with 2 quarts of water 1 hour and 10 minutes Alcohol and water, 3iiv, repeated and irrigated C 8 hours R. well

CASE 12—Atwell,¹⁵ 1903 S and A female, 35 P phenol, 3ss, in water T 20 min Sy coma, cyanosis, weak pulse Tr atropin, 1/50 gr, hypodermic Dilute alcohol, 3vi. Lavage with water, gallon 1 Alcohol, 95 per cent, 3vi Lavage in 5 minutes Magnesium sulphate, 3i, in water 0i. Stimulation Infusion normal saline. R. well

These two facts shown by a study of our own cases, namely, the immaterial difference in the mortality, whether the stomach was washed with alcohol or with some other liquid, and the apparently greater constitutional symptoms when the drug was taken with alcohol then when taken clear or in water, seemed to throw such grave doubts on the antidotal power of alcohol to carbolic acid when taken internally, and these doubts agreeing so well with the opinions expressed in the recent textbooks on toxicology, the authors determined before publication to undertake some experimental work in the effort to prove or disprove the antidotal action.

3 EXPERIMENTAL DATA

BY DRS BROWN AND CLARKE.

Acting under the direction of Dr Torald Sollmann, a series of animal experiments were carried on in the pharmacological laboratory of the Western Reserve University, the results of which are herewith published.

INTRODUCTION

Some experimental investigations of the subject have been undertaken by others, but these are rather unsatisfactory, the number of animals used by each investigator seems rather too limited to make the conclusions binding.

In 1901 Thornton¹⁶ made some experiments on a series of five dogs giving by stomach from one to four

10 Rodman Med. Record N Y 1900 vol lviii p 70

11 Gries Therapeutic Gazette (Detroit) 1901 vol xxv p 587

12 McDonald Fort Wayne Med. Jour Mag 1902, xxiii p 59

13 King New Orleans Med. and Surg Jour 1902 vol lix p 740

14 Marshall Med. Record N Y, 1903 vol lxi p 174

15 Atwell Virginia Med. Semi-Monthly (Richmond), 1903 vol viii, p. 73

16 Thornton Progressive Med Dec. 1901 p 343

8 Adams N Y Med Jour 1899 vol lxx, p 780

9 Klein Jour Am Med Assoc. 1900 xxxv p 1557

drams of phenol undiluted or with alcohol or oil. This was left in the stomach together with the antidote. He gave to one animal phenol mixed with 95 per cent alcohol and after the onset of toxic symptoms administered more alcohol. The result was death in four hours with no signs of improvement. Another animal was given phenol mixed with oil, which gave practically the same result. In the remaining animals phenol was administered and, after the poison symptoms had become manifest, alcohol in single or repeated doses was given without any beneficial effect.

The following year Wallace¹⁷ made observations on two rabbits and two cats. The first rabbit was given the lethal dose (0.6 gm. per kilo) subcutaneously, resulting in death in one hour and ten minutes. The second rabbit was given 5 cc. of 60 per cent alcohol subcutaneously and this followed five minutes later by the same dose of phenol as was given the other rabbit. The toxic symptoms appeared after the same interval of time as in the first rabbit. Five cc. doses of the diluted alcohol were injected at intervals without improvement of the condition. The animal died in one and one-fourth hours.

The cats were given the lethal dose by stomach, one receiving the aqueous solution and the other receiving the phenol in 60 per cent alcohol. Alcohol was later injected subcutaneously but without effect. Both animals died after nine hours.



Fig. 1—Intravenous injections of 1 cc. per kilo of 1 per cent phenol in normal saline at A, B and C. Time marks 15 seconds.

Method of Investigation—Our experiments may be divided into three groups:

1. Systemic antagonism (intravenous injection)
2. Antagonism in the stomach (5 per cent phenol)
3. Efficiency of lavage (undiluted phenol)

I. SYSTEMIC ANTAGONISM.

For the purpose of determining whether alcohol can lessen or abolish the systemic effects of phenol, a 1 per cent solution was injected intravenously into dogs, the dose of 1 cc. per kilogram (0.01 gm. of phenol) being repeated every minute. Three solutions of phenol were employed—one in normal saline solution, the second in 10 per cent alcohol, and the third in 20 per cent alcohol, the results produced by these solutions being compared.

Operative Methods—All dogs used in these experiments were first given sufficient morphin to render them quiet and then kept under complete ether anesthesia during the course of the experiment. Before coming out of the anesthetic condition they were killed.

A cannula was placed in the trachea, through which the anesthetic (ether) was afterward given, and a cannula in the carotid for blood pressure tracings. The intravenous injections were made through a cannula placed in the femoral vein and connected with a graduated burette which contained the injection solutions.

(A) *Effects of Phenol in Normal Saline* These will be described first for the purpose of comparison.

Blood pressure, and in some cases respiratory tracings, were taken. In all the animals the intravenous injection causes a fall of blood pressure which has a tendency toward recovery, depending on the quantity injected (Fig. 1). Th. Gies¹⁸ obtained the same results in his experiment with animals. The average fall is from 20 to 30 mm. of mercury. The fall begins almost immediately after the injection, reaches the minimum in thirty seconds and returns to about normal after sixty seconds. Each successive injection becomes less effective, with a tendency toward a slow gradual fall of blood pressure. Where the lethal dose is injected there is a rapid fall which terminates by stoppage of the heart (Fig. 2).

Respiration is but little affected except by the mechanical interference of the convulsive movements.

Onset of Convulsive Movements—In all the animals employed the intravenous injection causes a gradual onset of convulsive movements beginning with a tremor of the legs and jaw, which gradually increases until the contractions acquire a clonic convulsive character. The absence of a rise of blood pressure which is usually associated with convulsions is probably due to the deep anesthesia and to the rather mild type of the convulsions.

(B) *Effects of Alcoholic Solutions of Phenol*—



Fig. 2—Death from intravenous injection of phenol. Injection made at A.

These do not differ from those of the saline solution of phenol in either quality or quantity. This is shown by Table 1.

TABLE 1—INTRAVENOUS INJECTION (Dog)

Dog No.	Solvent	Fall of Blood Pressure after first injection	Twitching movements after c.c. per kilo
1	Normal saline	30 mm.	5 c.c.
4	Normal saline	40 mm.	5 c.c.
2	10 p. c. alcohol	24 mm.	3 c.c.
3	20 p. c. alcohol	40 mm.	5 c.c.

II. ANTAGONISM IN THE STOMACH

To determine the possibility of an antagonism in the stomach, the phenol was administered by stomach tube to rabbits. The just fatal dose (0.6 gm. per kilo) was given, as a 5 per cent solution in water, and in 10 per cent alcohol and in 10 per cent glycerin. These animals were not anesthetized.

(A) *Effects of the Watery Solution*—The first symptoms start in one to three minutes and consist in a general trembling of the body and legs. The legs grow weaker and the animal falls on its side. Convulsive movements of a clonic type then appear, varying somewhat in intensity, the legs may become extended and rigid, while in some cases the head is thrown backward. Death occurs in from twenty-six minutes to six days.

The alcoholic and glycerin solutions produced the same effect quantitatively and qualitatively. This is shown in Tables 2 and 3.

¹⁷ Wallace. N. Y. University Bul. of the Med. Sci., 1902, vol. II, p. 53.

¹⁸ Gies. The Archiv für Exp. Path. and Pharm., 1880, vol. XII, p. 401.

TABLE 2—DETAILS OF STOMACH EXPERIMENTS ON RABBITS

Rabbit No	Weight in Gms	Amount of Phenol Given (always 0.6 gm per kilo)	Diluent used	Time Elapsed Before Appearance of Convulsive Movements	Final Result
1	920	11	Water	1 m 45 sec.	Died after 28 min
7	770		Water		Tube passed into trachea
8	490	5.5	Water	1 m 30 sec.	Died after 25 min
9	980	11.7	Water	1 m. 30 sec.	Died after 6 days
10	770	9.2	Water	2 m. 10 sec.	Died after 8 hrs
3	870	10.4	10 p c. alc.	1 m 50 sec.	Died after 24 hrs
5	920	11	10 p c. alc.	6 m. 30 sec.	Died after 3 days
12	730	8.7	10 p c. alc.	3 m. 15 sec.	Died after 18 min
13	670	8	10 p c. alc.	2 m. 30 sec.	Died after 2½ hrs
* 4	830	10	10 p c. glyc.	1 m. 40 sec.	Died after 3½ m
14	1450	17.5	10 p c. glyc.	2 m. 45 sec.	Survived
6	1200	14.4	10 p c. glyc.	3 m 30 sec.	Survived.
11	780	9.3	10 p c. glyc.	2 m 10 sec.	Died after 2 days

* It was thought some of the solution was aspirated into the trachea in this animal

TABLE NO 3

TIME OF DEATH IN STOMACH EXPERIMENTS (Rabbits)

Phenol dissolved in	25 minutes	28 minutes	8 hours	6 days
Water	25 minutes	28 minutes	8 hours	6 days
Alcohol	18 minutes	2½ hours	24 hours	3 days
Glycerin	3¼ minutes	2 days	Survived	Survived

Microscopical Examination of the Stomachs—This was undertaken by Dr W W Williams in rabbits 1, 2, 3, 8 and 12. The findings may be arranged, according to the severity of the lesions, as follows

Rabbit No	Lesion	Medium in Which Phenol was Administered	Time Elapsing Before Death
1	None	Water	28 minutes
2	Very slight	Water	25 minutes
3	Fairly marked	Glycerin	3¼ minutes
8	Very severe	Alcohol	24 hours
12	Very severe chronic gastritis (probably not due to the drug)	Alcohol	18 minutes

It is seen that the local lesions are quite as severe with the glycerin or alcoholic solution as they are with the watery solution

From these results it is evident that the alcoholic solution is no less toxic than the aqueous solution, while

washings returned clear. One c c per kilo of 95 per cent phenol was then introduced through the tube and allowed to remain for ten minutes, when lavage was started, either with water or with 10 per cent alcohol.

(A) *Effects of Concentrated Phenol by Stomach Without Lavage*—This was tested on one animal. This showed an immediate fall of blood pressure amounting to 40 mm of mercury. The pressure remains about constant after this primary fall, with a tendency toward a slight gradual fall, which continues until death. At no time during the experiment was there any evidence of improvement in the condition.

(B) *Lavage*—In those animals in which lavage is employed, the blood pressure begins to rise after an interval of time which varies with different animals. The convulsive movements cease and the animals show all signs of recovery, the condition being judged by the blood pressure and convulsive movements.

The results are shown in Figure 3. They are identical for all the experiments, whether water or alcohol was used for lavage.

The details of the experiments are shown in Table 4.

4 THE LOCAL ANTAGONISM OF CARBOLIC ACID AND ALCOHOL, AND OTHER PHENOL—SOLVENTS¹⁹

It will be recalled that the employment of alcohol in phenol poisoning was originally based on the local antagonism of the two drugs. This antagonism, as is well known, can be easily demonstrated, by dipping the finger in carbolic acid and then washing it at once with strong alcohol. To secure a complete removal of the phenol effects, however, it is essential that the application of the phenol should be of short duration, and followed very quickly by the alcohol. This is illustrated by the experiments of Wallace.¹⁷ For instance, when the alcohol was used immediately, it removed all the effects completely, when it was used after ten minutes it removed the superficial whitening of the skin, but not the deep effects. When it was used after thirty minutes it had almost no effect. The addition of a small quantity of alcohol to the phenol increases its local effects—an obser-

TABLE NO 4
EXPERIMENTS ON STOMACH OF DOGS

Dog Number	Weight (Kilo)	Solvent Used	Time in Stomach	Initial Rtd Pressure	Blood Pressure 10 m After Giving	Blood Pressure Remain Low Level	Blood Pressure at End of Experiment	Convulsions Observed	Duration of Experiment	Result	REMARKS
10	14	(Control)		103	72	Until death					
1	16	Water	10m	102	57	1 hr 27 m	102	At death	2 hrs 45m	Died	Died
2	16	Water	9m	103	43	30 minutes	85	1 hr 20m	4 hrs 12m	Recovered	Animal killed
3	16	Alcohol	10m	98	60	34 minutes	60	1 hr, 40m	2 hours	"	Died from ether
4	16	Alcohol	10m	101	30	15 minutes	100	3 hrs 10m	4 hrs, 25m	"	Animal killed
5	16	Alcohol	10m	89	30	Until death	20	At death	4 hrs 29m	Died.	Died from ether
									46 minutes		Tube did not enter stomach in washing

the glycerin solution appears to be rather less fatal than the other, since two of the animals recovered completely. This might be due to slower absorption, for we are loathe to attribute it to any antidotal properties, either chemical or physiologic.

111 EFFICIENCY OF LAVAGE

To determine the effect of lavage after the administration of concentrated phenol, and the relative value of water and diluted alcohol for this purpose we employed dogs anesthetized with morphin and ether and connected for blood-pressure tracings. A stomach-tube was inserted and the stomach washed with water until the

variation which effectually refutes the theory that alcohol and carbolic acid enter into an innocuous chemical combination. The increased effect is to be explained by a more rapid absorption of the slightly diluted acid.

Wallace attributes the antagonism to the solvent action of alcohol on the phenol which would remove it much more readily from the superficial layers of the skin than would water. If the theory be correct, other phenol solvents must produce the same effect as alcohol. Wallace tested this with chloroform, ether and benzol, with positive results.

¹⁹ This chapter was kindly furnished by Prof. T. Sellmann by whom the experiments were performed.

We made the following experiments, using somewhat different solvents.

EXPERIMENT 1—(a) The finger tips are plunged for thirty seconds into liquefied (95 per cent) phenol, then for five minutes into the solvents. At the end of this time the finger in water is blanched, the fingers in 50 per cent alcohol, 50 per cent glycerin, ether and cottonseed oil appear normal. (b) The fingers are again dipped in the carbolic acid for one minute, then for one minute in the solvents.

The blanching is very conspicuous in water, then follows the 50 per cent glycerin then the 50 per cent alcohol and ether.

The sensory effects are greatest in water, ether and 50 per cent alcohol, less in 50 per cent glycerin and oil.

EXPERIMENT 2—The fingers are dipped into liquid carbolic acid for one and one half minutes, then into solvents and observed at end of (a) one minute, (b) two and three minutes.

(a) One minute in solvents. The blanching is by far the most conspicuous in water, then follows the 25 per cent glycerin and 25 per cent alcohol. Turpentine and cottonseed

effect is mainly due to solution and is not chemical. The solvents also tend to lessen the burning sensation, probably by removal of the phenol. They appear to be quite unable to prevent the late effects of the phenol, which may be attributed to the phenol which had already penetrated deeply when the solvent was applied.

It appeared interesting to determine also whether these solvents exert any effect when the carbolic acid is left in contact with the skin. For this purpose 5 per cent solutions of phenol were made in various solvents. These were arranged in five small beakers, so that all the fingers of the left hand could be inserted and withdrawn simultaneously. The degree of blanching, tingling and anesthesia was compared after five minutes. The tingling sensation proved to be too irregular to be of any value for comparison. As in the previous series, the nature of the solvents were unknown to the experimenter and compiler until the conclusions had been drawn.

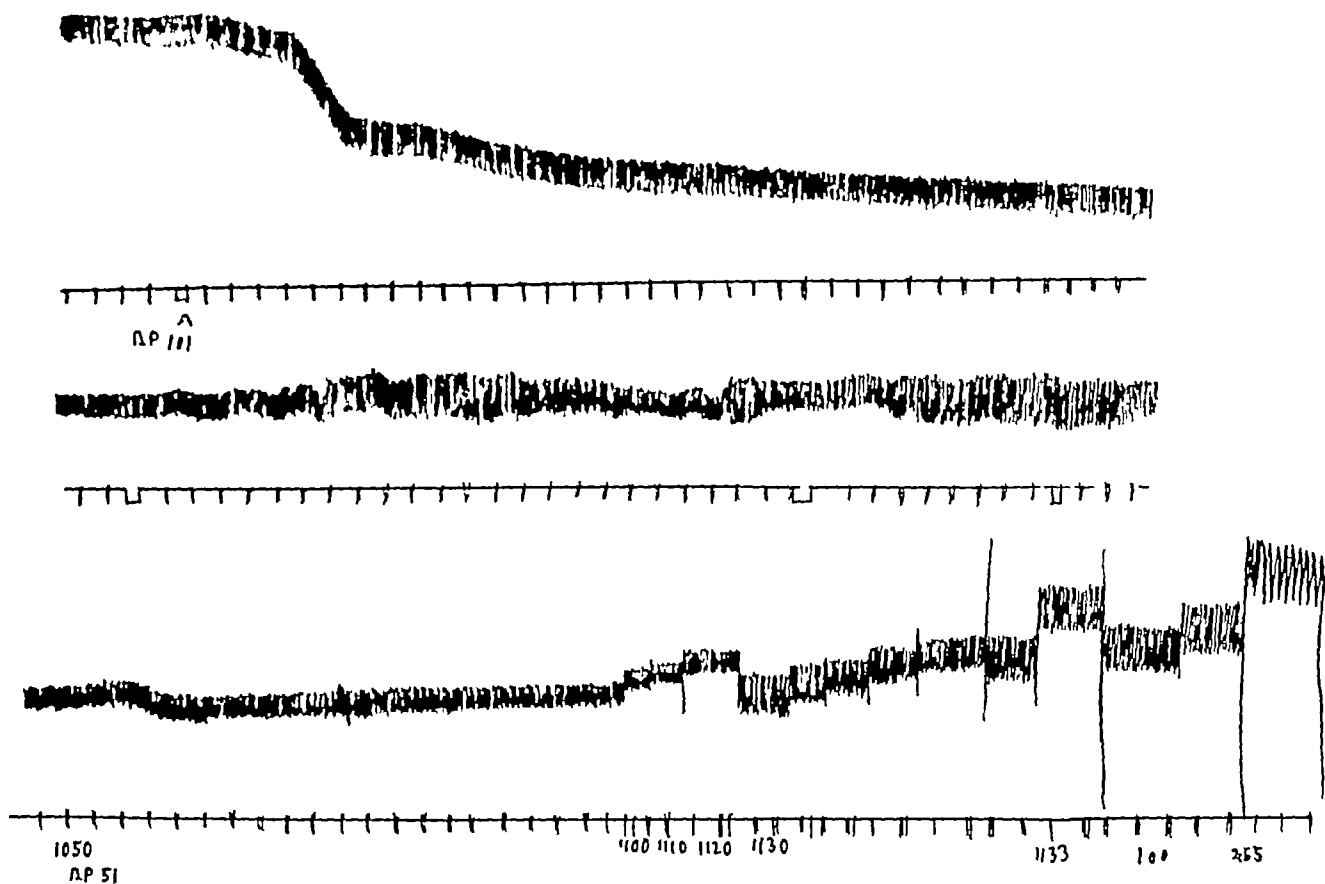


Fig. 3—One c.c. per kilo of 95 per cent phenol introduced into the stomach at A, time 10 25. Began lavage at B, time, 10 35, finished lavage at C. Blood pressure at end of experiment 100, time, 2 55. Base line corresponds to 0 pressure.

oil appear normal. Burning is felt in the water, and in the glycerin and alcohol solutions, not in turpentine and oil. The water finger also shows the greatest anesthesia.

(b) Two or three minutes in solvents. The blanching is most pronounced in the water, then follows 25 per cent glycerin, then 25 per cent alcohol. None is seen in turpentine and oil.

(c) The finger which had been put in water and which was still very much whitened, is rinsed in 95 per cent alcohol. The blanching disappears almost completely at once.

(d) On the following day the skin of the fingers is rough and broken, and this condition persists for several days. It is alike in all the fingers.

It may be concluded that all phenol solvents arrest the local action of the phenol, i.e., the blanching action. This and the observation that dilution of the alcohol greatly impairs its efficiency sufficiently show that the

20. In all the experiments the subject was not aware of the nature of the solvent, the containers being numbered and the results tabulated by these numbers.

EXPERIMENT 3—Comparison of 5 per cent phenol in water (W), 10 per cent alcohol (A), 10 per cent glycerin (G), and cottonseed oil (O).

Experiments on two persons gave identical results.

The anesthesia was most conspicuous in W, somewhat less in A, absent in G and O.

The blanching was marked and about equal in W and A, almost absent in G, quite absent in O.

EXPERIMENT 4—Comparison of 5 per cent phenol in water, 25 per cent alcohol, 25 per cent glycerin, turpentine and cottonseed oil. The experiment was repeated on nine persons, with the following results.

Anesthesia	Most Marked	Less Marked	Absent
Water	cases	1 case	1 case
Alcohol	2 cases	3 cases	1 case
Glycerin	None	1 case	8 cases
Turpentine & Oil	None	None	9 cases

BLANCHING

	Most Marked	Second Place	Third Place	Fourth Place	Absent
Water	9 cases	None	None	None	None
Alcohol	None	5 cases	2 cases	None	2 cases
Glycerin	None	3 cases	3 cases	None	3 cases
Turpentine	None	None	2 cases	3 cases	4 cases
Oil	None	None	None	None	9 cases

TINGLING

	Most Marked	Second Place	Third Place	Absent
Water	1 case	None	None	8 cases
Alcohol	3 cases	None	None	6 cases
Glycerin		1 case	None	8 cases
Turpentine		None	None	9 cases
Oil	1 case	None	1 case	7 cases

These results show that the addition of all the solvents diminishes the local effects of phenol. The effect on the tingling sensation is, however, irregular. This may be attributed to the difficulty of exact observation. The effect is more pronounced on the superficial action (blanching) than on the deeper actions (anesthesia). Oil alone prevents both actions in all cases. Then come, in order of efficiency, turpentine, 25 per cent. glycerin, and 25 per cent. alcohol. Glycerin is more effective, for the same degree of dilution, than is alcohol.

In this experimental arrangement the effect of the solvents can not be explained, as in the previous series, by removal of the phenol. Nevertheless, it seems to be connected with their solvent power. It may be explained in the following manner. If a substance is introduced into a mixture of two immiscible solvents, a and b, it will be distributed between these two solvents in a ratio proportional to its solubility in a and b. If it is more soluble in a, this will contain a greater amount. This may be demonstrated by shaking a 1 per cent. solution with an equal volume of olive oil in one test tube, and with an equal volume of petroleum benzine in another. If a little ferric chlorid solution is added to both test tubes, the watery layer will not be colored in the oil tube (the phenol having passed into the better solvent), while it will be colored a deep violet in the benzine tube. The benzine being a poor solvent, almost all of the phenol has remained in the water.

In our experiment, the fluids of the tissues constitute one solvent, the fluid in which the carbolic acid is applied the other. The better the solvent power of our solvent, the less of the carbolic acid will pass into the tissues.

In the case of alcohol, and to a lesser extent with glycerin solutions, some of the solvent is doubtless absorbed into the tissues, which explains the relative inferiority of these to turpentine, and especially to oil, which are absorbed much more slowly.

These experiments contradict the rather prevalent opinion that the absorption of phenol is quickened by alcohol and perhaps also by glycerin. As far as we know, this opinion is purely theoretical. It may be true as far as the addition of small quantities of these substances are concerned, which would then act, not so much as solvents, but by increasing the fluidity of the phenol—a very important factor in absorption. It might theoretically hold also for the alimentary canal, since these solvents are absorbed there with considerable rapidity. This view is supported by the clinical experiences, although our experiment on rabbits (Series 2) can scarcely be interpreted in its favor. As concerns the skin the experimental results constitute a positive refutation of the quicker absorption of alcoholic solutions in this situation.

The relative inferiority of alcohol to the other solvents is not sufficient to be of importance, while its greater fluidity and its miscibility with water constitute practical advantages more than sufficient to counterbalance the theoretical deficiencies. In emergencies, however, the value of the other solvents, particularly oil, should be borne in mind. It is interesting to note that the use of the latter antidote preceded that of alcohol.

GENERAL CONCLUSIONS

From the above experiments the following conclusions may be drawn.

1 Alcohol has a local antidotal effect to carbolic-acid burns, due to its solvent action.

2 There is no evidence of chemical antagonism between alcohol and phenol.

3 There is no effect produced by alcohol on carbolic-acid poisoning after the latter has been absorbed into the system, as is shown by the intravenous experiments on dogs.

4 Alcohol and phenol placed in the stomach give no different results from phenol alone.

5 Lavage with alcohol is effective when the phenol is in the stomach, but its superiority over lavage with water is not pronounced.

From the clinical aspect it appears that alcohol has a local antagonism to carbolic acid. When the latter is taken in whisky the feeling of discomfort is less marked, and the local eschar is absent or but slightly evident. In cases of poisoning, lavage with alcohol is apparently an effective method of treatment. This is borne out by a comparison of thirteen cases here reported with a mortality of 15 per cent., with the collection made by Falck²¹ in 1868 of forty-six cases in which the acid was taken internally with thirty-five deaths, a mortality of 65 per cent. On the other hand, the fourteen cases treated at the Lakeside Hospital by lavage prior to the use of alcohol with three deaths, a mortality of 21 per cent., give results so nearly akin to the alcohol cases that it would appear that the lavage were the dominant factor rather than the alcohol. When it is considered that it was only in the early nineties that stomach washing came into general use, and even later that the fear of its use in cases of corrosive poisoning was overcome, it seems probable that the good results in carbolic-acid poisoning from the use of alcohol, during the past few years, were due to the lavage and not to any antidotal property of the alcohol.

The authors do not wish to be interpreted as considering that alcohol is of no value in cases of carbolic-acid poisoning. *A priori* its solvent action and a slight tendency in the experiments with phenol in the dog's stomach, to an earlier rise in blood pressure, when the stomach is washed with an alcoholic solution, than when water is used, point to its value as a means of removing the poison from the stomach. From abundant clinical evidence, both in their own experience and in literature, it would appear to them to be an aid, when properly used, in the saving of life. On the other hand, this same solvent property, and the more marked symptoms of intoxication, when the poison has been taken in whisky, seem to establish a contradiction to the alcohol being used as an antidote and left in the stomach.

The procedure recommended is immediate, abundant lavage with 10 per cent. alcohol, this to be followed by lavage with plain water, and stimulation as indicated. The point to be borne in mind is that alcohol is not effective after the carbolic acid has been absorbed and, to

²¹ Falck. Ref. Birth. Poisons. Their Effects and Detection. Wood's Library 1855 p 146

be of value must be used while the poison is still in the stomach.

The other common methods of treatment of phenol poisoning are now being investigated and the results will be communicated later.

The fact that three of the five fatal cases in the Lakeside Hospital series died of pneumonia, and one, at least, of these of a definite bronchopneumonia of the inhalation type, has impressed the authors with the necessity of care in the method of performing lavage in this class of cases. With the patient lying on his back in a comatose condition, with the gastric contents regurgitating around the outside of the stomach tube, it is a simple matter for material to enter the larynx and set up an inflammatory process in the lung. To overcome this danger, the authors recommend, immediately after the tube is passed, to turn the patient on his side or face, with the head low, thus allowing any fluid in the pharynx to escape through the mouth. Since this method has been used, there have been but few pulmonary signs during convalescence.

For his kindness in directing the work and for valuable suggestions and criticism, the authors wish to express their sincere thanks to Dr. Torald Sollmann.

TESTS FOR ACETONE IN THE URINE*

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The interest of the surgical section of the medical profession is just now deeply concerned with the question of acetoneuria. This interest has been awakened by observations of the frequent occurrence of the urinary acetone-complex following anesthesia and associated with a toxicosis that has been fatal in a number of instances. That acetone occurs frequently following anesthesia has been long known, and that it frequently occurs following the ingestion of many narcotics is equally well known. That the toxicosis is the result of the acetone-complex, that it is, in other words, an acid intoxication, is not demonstrated. On the contrary, it is much more probable that the toxicosis and the acetone-complex are fellow results of a widespread autolytic degeneration, of a ferment intoxication that has been in some unknown way inaugurated by the anesthetic or narcotic. It is known that many poisons act, in large part, by the inauguration of such autolyses, and this observation holds as well for narcotics as for phosphorus. At present acetone is held to be always derived in the body from the fats through the intermediary stages of *n*-oxy-butyric and diacetic acids, but it can not be denied that it might have other derivations. Chemically, acetone might be easily derived from glycerin through the intermediary stage of di-oxy-acetone, and other reactions that are feasible from the chemical point of view will be easily recalled. For the anesthetics, a second element enters into the discussion. The chemical relations of chloroform and ether as so close to acetone that it is probable that a certain amount of acetone may be formed in the body from these substances. We have to deal, therefore, with a derivation of acetone from the fats of the body under the influence of a toxic autolysis, and a derivation of acetone of purely chemical nature from the anesthetic. Whether or not acetone occurs in the urine following every administration of chloroform is not known, in the published researches reliable meth-

ods have not been used. Certain it is that acetoneuria is now being diagnosticated by unreliable tests.

For several years I have tested nearly all the urines that have come under my notice with the different tests for acetone, and have also had a large class experience with mixed urines. These experiences have taught us that the commonly used tests for acetone are quite valueless, in that they yield positive results with urines free of acetone in the practical sense. There are two really good tests for acetone, those of Stock and of Denigès. Both these tests have been repeatedly recommended for clinical use, but for some inexplicable reason they have not been employed to any extent by clinicians. The test of Stock is a particularly reliable one, because it is a test for ketones and is not given by alcohols and aldehydes. It is very simple and rapid in execution. One must use for it the distillate of the urine. This, it must be insisted on, must be the rule for all tests for acetone. In classroom work we use from 50 to 100 cc of urine, which is made acid by the addition of a few drops of either acetic hydrochloric or sulphuric acids. The first 10 cc of distillate will contain nearly all the possible acetone. For the use of the older tests for acetone (the iodoform, the mercuric oxid and the sodium nitroprussid tests), the distillate must be subjected to a second distillation, for the Stock and Denigès tests, however, this is not necessary. About an inch of the distillate is placed in a test-tube, a drop or two of a 10 per cent solution of hydroxylamin hydrochlorid added (shaken), then a drop or two of a 5 per cent solution of sodium hydroxid (shaken), then a couple of drops of pyridin (shaken) then about an inch of ether (shaken), bromin water is then added, drop by drop, with mixing until the ether layer becomes yellow, and then a few drops of strong hydrogen peroxid are added, if acetone be present, the ether will turn a distinctive green-blue. The test sounds a little formidable, but when the reagents are ranged in a row of dropping bottles, it is very simple. The test is not very delicate, for example, I have never seen a positive test in a normal urine of a person on a diet of not over 100 grams of fat *per diem*, though we know that all urines contain a faint trace of acetone. The test is very elective, and for practical work the lack of a greater sensitiveness is an advantage. The test of Denigès is quite as easily carried out. About an inch of the distillate in a test-tube is mixed with an equal amount of a solution of the subsulphate of mercury (mercuric oxid 50, sulphuric acid 200, water up to 1,000) and the mixture allowed to simmer (best stoppered) for about five minutes. A white crystalline precipitation occurs on cooling, which is very distinctive in appearance. If acetone be present in excess, the test is less well given. If but a trace be present, a trace of sodium chlorid will aid the precipitation, but it must not be added in excess. This precipitate is not soluble in dilute hydrochloric acid.

These two tests agree. I have never seen the Stock test present without finding the Denigès test positive. In a few instances I have obtained faint reactions with the Denigès test when the Stock test was negative. Equally distinctive is the Bamberger test, the formation of crystals of *p*-nitro-phenyl-hydrazone-acetone on heating the distillate, acidulated with acetic acid, with *p*-nitro-phenyl-hydrazin. It is not a convenient test, however, since the crystals must be recrystallized from alcohol and their melting point determined.

It is a yearly experience in our classroom work that, with the mixed urine of the students, the iodoform reac-

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tion is quite regularly positive, the mercuric oxid and the sodium nitroprussid tests very often positive, and the tests of Stock, Denigès and Bamberger negative. I have often had the same experiments with individual urines and although it has been most often noted in cases in which the patients were on drugs of various kinds, I have often seen it in the urine of healthy persons not taking any drug. When acetone is present, the iodoform, mercuric oxid and the sodium nitroprussid tests are positive, the error is always on the other side; they yield positive results when acetone and diacetic acid are absent.

I have often found acetone to be present as indicated by the tests of Stock and Denigès, without a reaction for diacetic acid being obtainable. This latter substance is tested for as follows: The urine is acidulated with hydrochloric or sulphuric acid and then extracted with ether. The ether will contain other substances besides the diacetic acid and acetone, and may be purified, if desired, as follows: The ether is shaken with an alkaline water which will take up the acid. This solution is then acidulated and the diacetic acid removed by another extraction with ether. This ether is then shaken with a solution of ferric chlorid in water so dilute that the color is scarcely discernible, if diacetic acid be present, the diluted Burgundy-red color is developed in the water. This test has one known fallacy. If the urine contain an abundance of aromatic derivatives, such as phenol, salicylic acid, the coal-tar antipyretics and hypnotics, traces of these will pass into the ethereal extract, even into the purified ethereal extract. To rule these out, the reaction of Arnold may be employed. The ether is mixed with an alkaline water and the diacetic acid is thus gotten back into watery solution. Five c.c. of a freshly made 1 per cent solution of p-amido-aceto-phenon in 2 per cent hydrochloric acid are mixed with half the volume of a 1 per cent sodium nitrite solution, a few cubic centimeters of the watery solution and then a drop of strong ammonia are added. Two or three cubic centimeters of this mixture are then added to some 15 c.c. of hydrochloric acid, 2 or 3 c.c. of chloroform are added and then two drops of a fresh solution of ferric chlorid. The test-tube is then slowly and repeatedly inverted, so as to permit a mixing without especial shaking. The chloroform turns a marine blue if diacetic acid be present, a darker blue if large amounts be present. For unknown reasons the test fails at times, this is due possibly to the presence of other substances that pass into the ethereal extract. I have never seen diacetic acid present without acetone. Diacetic acid may be present without b-oxy-butyric acid, but I have never seen the b-oxy-butyric acid present without diacetic acid.

If acetone is to be tested for, it should be done with good methods entirely apart from any questions of the value of the information sought or the pathogenesis of the acetone-complex. The tests of Stock (described in 1899) and of Denigès (described in 1898) are certain in their results and easy of execution, and should replace the fallacious tests with Lugol's solution, mercuric oxid and sodium nitroprussid.

Alcoholic Dementia.—Dr C. L. Hamilton says that alcoholic dementia is generally the result of organic brain degeneration, due to the action of alcohol, and that as the mental symptoms are the result of structural degeneration they are usually permanent and not relieved by the discontinuance of the poison.—*Ill. Med Jour*

THE TREATMENT OF ABORTION

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Before entering on the consideration of this subject I wish to say a few words other than those concerning the treatment.

For practical purposes abortion may be defined as the interruption of gestation before viability of the child.

Physicians are not infrequently consulted as to whether or not the induction of an abortion is indicated in this or that case, and one must be very wary before giving an opinion, because the history given by the person asking for advice is often misleading. In heart disease, when there is dilatation with sufficient hypertrophy to compensate for the dilatation, the induction of an abortion should not be sanctioned. Neither is it indicated in psychological disturbances or in pulmonary diseases, except perhaps under exceptional circumstances. It is indicated, however, in pernicious hyperemesis and in some cases of chorea. In consultation with a prominent neurologist I saw one patient in whom convulsions occurred at frequent intervals, the patient not having been subject to epileptic seizures before pregnancy. They ceased after the uterus had been emptied. In nephritis the induction of abortion, in my opinion, is always indicated if the renal disease was present before the conception or if it manifests itself during the first three or four months of gestation.

In distorted or markedly contracted pelvis the patient should be permitted to decide for herself whether she wishes to go to term and be delivered by Cesarean section or whether she prefers to have an abortion induced. Due consideration should be given to each and all features connected with the individual case before the induction of an abortion is determined on, and it should never be undertaken unless it has also been sanctioned in consultation with another physician. If decided on the most favorable time for its induction is before the third or fourth month of gestation. Regarding the technique to be used in inducing an abortion, the well-known method with bougies has always proved itself the most reliable. If the bougie has not brought about the desired result in from twenty-four to forty-eight hours it may be supplanted with advantage with a tampon of a strip of nosophen (tetraiodo-phenolph-talein), iodoform or sterile gauze carried into and through the cervical canal into the uterus. As much gauze should be used as can be packed into the uterus without actually employing force. If carefully done there is no danger of rupturing the sac of the ovum. The precaution of the strictest asepsis or antisepsis in all details must be insisted on.

GENERAL TREATMENT

The treatment of abortion may be divided into four parts:

1. Imminent abortion, in which there are signs pointing to the probable occurrence of an abortion, yet in which the symptoms may again subside on appropriate treatment.

2. Progressing abortion, in which the threatened abortion has further advanced so that its actual occurrence can not be prevented.

3. Incomplete abortion, in which a part of the prod-

acts of conception has been expelled from the uterus, but some part is still retained therein

1. Complete abortion, in which the ovum and its membranes have been completely expelled from the uterine cavity

In imminent abortion the patients have either an occasional 'spotting' of blood, or, at other times minimal bleeding. This is sometimes associated with an uneasy feeling in the lower abdomen, seldom also with slight expulsive pains. In the second class the patients have a more or less profuse hemorrhage, sometimes so profuse as to be dangerous. In this stage expulsive pains caused by uterine contractions are usually present, they may sometimes be absent, however. The bleeding may be constant or it may be at irregular intervals. This second stage is a continuance of the first division mentioned and the ovum is still in the uterine cavity. The cervical canal in this stage may be contracted or it may be dilated or dilatable. In the third class the cervical canal may be either closed or dilated. The bleeding in this class varies in quantity and duration. It may continue only a few hours or it may last several days, and occasionally it may continue for weeks or even for months. It is usually dependent on retained particles of placenta if the bleeding is of long duration, or membranes or placental tissue in instances of short duration. In the fourth class the uterus has usually regained former consistence and the cervical canal is again contracted, but it may in some instances be dilatable. Sometimes quite free bleeding may still be present in this class of patients.

So far as the treatment of abortion is concerned, there is a unanimity of opinion as to the object to be attained in imminent abortion, but as to the progressing, incomplete and complete abortion there is a wide difference of opinion. I desire to give the views arrived at in more than twenty-six years of extensive personal experience with the different methods of treatment in vogue.

Before taking up the subject under separate heads permit me to consider it in a general way. It is understood that in cases of threatened abortion everything possible should be done to prevent the mishap. When, however, it is evident that the pregnancy can not be continued the uterus should be emptied at the earliest possible moment consistent with the greatest immediate and subsequent safety for the patient, and here opinions differ as to which method assures the greatest safety. It must be borne in mind that the treatment of abortion necessarily differs in its aspects in relation to safety according to the physician's surgical training and the surroundings of the patient. An intervention that would be safe in a well-conducted institution or in the homes of the wealthy, if performed by a man thoroughly educated in special work, would not be safe in a tenement house in the hands of an inexperienced physician. The object of my address is to express what I believe to be the safest treatment under all circumstances.

In the latter part of the seventies and in the early eighties, when active intervention was first recommended in instances of abortion, prominent specialists scorned those who would let Nature take her course, saying that they were too slow in keeping pace with progress. They advocated the invariable removal of the products of conception with instruments as soon as it was evident that abortion was inevitable. I, too, was then an obedient disciple of the teaching in favor of undelayed active intervention, but I have since modified my views because to a conscientious observer experience is an excellent teacher. Advocates of active intervention

in all cases of abortion take the position that patients who are treated by the expectant plan and allowed to abort spontaneously, after it is evident that the progress of the abortion can not be prevented, are in too much danger from hemorrhage and infection, that a better and more rapid involution of the uterus takes place if active measures are used, that there is less likelihood subsequently of endometritis, with perhaps the association of menorrhagic, metrorrhagia and irregular menstruation, less liability to abort again in the event of a future pregnancy, also less risk of sterility following the abortion. All these risks are avoided, they claim, if the patients who are in a stage of progressive abortion or who already have completely aborted were invariably curetted. The active intervention, it is claimed, is further of advantage because it is a great saving of time for the physician and the patient and is absolutely free from danger. I can admit only one part of all the advantages alleged for immediate intervention, namely, that of saving time. I also agree to the comparative freedom from danger if the attendant is a thoroughly trained man in that kind of work. Some recommend curetting always, even if the ovum and its adnexa have been expelled, for the purpose of completely removing the decidua vera and of making sure that no adherent particles of placenta remain, others, who modify somewhat that advice, believe and teach that it is necessary to curette only in cases of incomplete abortion. The result, especially in this country, is that the curette is used oftener than any other surgical instrument by family physicians, and curetting is thought by many to be a perfectly harmless and safe procedure. The carrying out in practice of such a view by so many physicians may be excusable if we consider that there are many whose teaching may be presumed to be from a fountain of authority who by sayings and writings taught many colleagues the necessity for curetting in abortion cases.

After seeing a very large number of infections and a number of accidents in the hands of physicians not so experienced in gynecologic technics as they ought to be to undertake this kind of work successfully, and after keeping under protracted observation a large number of patients in hospital and in private practice, I gradually began to change my views, and the more I analyzed the more certain I became that I had been in error in my method of management of abortion cases.

Experience in obstetrics has shown that those patients do best with whom Nature is allowed to take her course and no intervention practiced unless there exists a positive indication for it.

While an abortion is a pathologic process in contradistinction to the physiologic process of labor, yet, so far as the necessity for surgical intervention in abortion is concerned, it should be restricted, just as in obstetric practice, to those cases in which there is an absolute indication for it. It would carry me too far to go into all the details as to why there exists such a difference between the pathologic process of abortion and the physiologic process of parturition, let it suffice to say that the principal reasons are to be found in the changes in the placenta and in the decidua during the latter period of pregnancy and in the greater contractile power of the uterus at the normal termination of gestation.

One need not worry about a possible future danger in the greater number of instances of abortion so long as the patient is kept clean, because Nature will take better care of an ovum and its adnexa or of retained remnants than we can with fingers or instruments. After most painstaking research I have been unable to confirm

the opinion which I formerly held regarding the detrimental effects previously spoken of, I have not found that patients who are treated without surgical intervention, that is, those in whom the interior of the uterus is not scraped with a curette, or with whom forcible manual removal of the conception products is not undertaken, are in worse health than those who were subjected to the aggressive surgical method. I have not observed that the retention of decidua in women who had previously enjoyed good health gave rise to any trouble during convalescence. Neither did such women seem more liable to endometritis or to subsequent sterility. It is true that the menses after an abortion, during the first one, two or three months, are somewhat more profuse than they were during former normal menstrual periods, yet this is not caused by the non-intervention, this condition is quite normal and frequently occurs after normal delivery. I do not wish to convey the idea, however, that artificial means to empty the uterus of conception products should be neglected when an indication therefor is present. When there is an elevation of temperature or evidence of decomposition of retained conception products, or in the event of profuse bleeding, it is necessary to resort to artificial means to empty the uterus.

If we do resort to intervention for the purpose of emptying the uterus it is preferable to accomplish this with a finger rather than to resort to a curette whenever it is possible thus to accomplish our object. The use of a curette is indicated only in those cases in which remnants can not be manually removed.

Sometimes difficulties are experienced in endeavoring to remove conception products manually, but these difficulties are experienced only when the local conditions are unfavorable for such intervention. Unless the index finger can be readily passed through the cervical canal and all parts of the uterine cavity explored, perseverance in attempts at the removal of the remaining parts of the placenta, membranes or fetus by manual manipulations is not advisable. It must be granted, however, that much depends on one's dexterity, it would not be logical to expect a physician who had had but little experience with gynecologic technic to possess the same ability as one who had had special training in this work and perhaps many years' experience. The manual removal of conception products is often difficult because of frequently recurring contractions of the cervix and because of the increased size of the uterus, so that it is difficult to get the finger up to the fundus.

The employment of a curette in a puerperal uterus is more or less risky because such a uterus does not offer the same amount of resistance to the rigid, unyielding instrument as the non-puerperal uterus, and consequently a perforation may occur even in the most skilled hands. The tactile sense of the finger, however, can always determine what it is doing in the uterine cavity. Another risk incurred when a sharp curette is used for the scraping is that the endometrium may be so deeply destroyed that subsequent atresia of the uterine cavity may result. Such women can not again become pregnant, and the menstrual function may cease entirely. I have seen several such cases.

If a perforation occurs in a non-infected uterus no harm is likely to result if the patient is immediately left alone and no further intrauterine manipulating done. If, however, the uterus is infected when the perforation occurs there is great danger of peritoneal infection. Further there is danger of a loop of intestine coming through the perforation. I have seen one such

sad accident in the hands of a physician who had had considerable experience with this so-called trivial, but in reality, serious operation. Not only did the coil of bowel prolapse, but, still sadder, it was mistaken for the umbilical cord and torn. At the abdominal section, made by me, it was shown that the bowel had been deprived of its mesentery for about fourteen inches. A number of bowel accidents are on record as the result of curetting for the purpose of cleaning out conception products from a puerperal uterus. Profuse bleeding, and sometimes even alarming hemorrhage, may occur during the curetting of a puerperal uterus, and still the removal of all conception products is not assured.

Let us take for granted that an indication for the employment of a curette is present—and indications certainly do exist in some cases—what kind of an instrument should be selected? It is my opinion that a dull curette is useful only in those cases of abortion in which remnants of placenta are still in the uterus and inaccessible to the finger, then a large dull curette may be used to loosen them. I have not seen any cases in recent years, however, in which I found such an instrument necessary. Other treatment has proved itself more satisfactory and safer. If a curette be used at all, a large, broad, sharp curette is to be preferred, because no physical force is required to scrape over the interior of the uterus, a broad instrument is not so likely to cause a perforation as a narrow one, besides small adherent placental remnants are more likely to be removed by an instrument that covers a larger area.

SPECIAL TREATMENT

Imminent abortion is best treated with absolute rest in bed and the internal administration of a narcotic like codein, giving doses of 0.03 to 0.05 (grs $\frac{1}{2}$ to $\frac{3}{4}$) at intervals of one, two or three hours, according to circumstances, until from two to six doses have been taken. It may be possible that viburnum prunifolium is beneficial, but I have been unable to verify the claims made for it in the prevention of abortion when that drug alone was used. I believe that the first large dose of the narcotic and the absolute rest are the most important factors. Tampons and the preparations of ergot, or applications of ice bags, to stop the minimal bleeding sometimes present in these cases should be avoided, because these remedies may cause uterine contractions, and therefore are likely to bring about that which we are desirous of preventing. I have succeeded in preventing abortion several times after the fifth month of gestation when the cervix had been dilated to from one to two centimeters in diameter, and in one instance that is still quite vivid in my memory the dilatation had been advanced to about three centimeters. The finger could be readily passed through the cervical canal and could palpate the membranes, but no bleeding was present, yet after the administration of one-third of a grain of morphin subcutaneously, and three hours later three-quarters of a grain of codein, the expulsive pains, which had occurred at intervals of every hour or two for the previous half day, subsided and the patient went to term. Her pregnancy had advanced to the sixth month. In none of the patients alluded to had there been more than a minimal amount of bleeding, it was limited to a slight "spotting," so that one may, to some extent, be governed in giving a prognosis as to the possibility of preventing an abortion, even if the cervix is dilated or dilatable, by the amount and the character of the blood lost. For instance, in cases in which there was a dirty, quasi-grumous bloody discharge, although no marked

If the ovum and its adnexa have been expelled and there is still a continuance of bleeding and the cervix is contracted, the administration of ergot is indicated, whether it is given in the form of fluid extract or one of the other preparations of ergot, such as ergotole or ergotin, is a matter of personal choice, I have usually given the preference to Squibb's fluid extract if the patient did not object to the taste and if the stomach did not rebel against it. In patients in whom the uterus was not markedly enlarged and the cervix firmly contracted I have seen the most marked benefit from the administration of hydrochlorid of cotarnin (stypticin) in three-grain doses, given in capsules at intervals of three hours. The powder should be ordered to be put in a dry form into the capsules. Should the bleeding not cease from the administration of one of the remedies mentioned, curetting is indicated, with subsequent irrigation with a 1 per cent carbolic acid solution. A similar procedure is indicated if the cervix is dilated under conditions above described.

Let us now consider the cases in which the embryo has been expelled, but in which the placenta is still in the uterus and the cervix contracted. In such instances, in the absence of fever, whether there is bleeding or not, we should treat the patient on the quasi-expectant plan and firmly tampon the vagina with iodoform gauze and administer ergot to bring about uterine contractions. I should not consider the necessity for more active intervention unless there was evidence of disintegration of the uterine contents. If the cervix is dilated, the uterus may be tamponed as previously described, or the placenta should be removed manually if it is not expelled spontaneously in twenty-four hours.

In that class of patients in whom the abortion is complete nothing at all should be done except to order rest in bed the same as after confinement. I believe the teaching that they should be curetted for the purpose of removing the decidua inadvisable.

It is obvious from what I have stated that I prefer to give the expectant plan of treatment the widest possible range, and I adhere strictly to it unless there are contraindications to it.

In instances of atypical bleeding, several weeks or months after a supposed complete abortion, one should not hesitate to examine the interior of the uterine cavity manually to ascertain whether the bleeding is caused by remnants of adherent placenta, a deciduoma or perhaps malignant growth, if a previous curetting and internal medication have been without effect. The cervix in such cases must be dilated to permit of the introduction of the examining finger. Usually steel dilators are made use of for this purpose, but some physicians prefer tents and still others use iodoform gauze. After having employed these several methods at different times for several years past, I have practiced dissection of the posterior cervical wall as the most satisfactory method of rendering the uterine cavity rapidly accessible to manual examination under the circumstances mentioned. It is quicker than any other method, and in my experience devoid of risk of subsequent infection and it has otherwise no untoward consequences. The uterus is steadied with a double tenaculum forceps, one blade on each side of the median line, a scalpel, or a hysterotome or a pair of scissors is used to split the posterior wall of the cervix carrying the incision through the internal opening of the cervix, after which the uterine cavity will be found accessible to the average-sized index finger. By this method we have a smooth

and clean wound, and after examination it can be readily closed with a few interrupted chromicized catgut sutures. I have made a considerable number of intra-uterine examinations after having resorted to this procedure, and so far have never failed to get an absolutely satisfactory result.

Let us now consider those patients in whom there is evidence of infection. In such cases the uterus should be emptied as soon as possible, whether the cervix is dilated or contracted. If the latter is the case it should be dilated. I prefer for this purpose a branched steel dilator. An excellent instrument of this kind has been devised by my associate, Dr A. Brothers. It gives an equal circumferential dilatation. It would be still better if the branches did not have so much spring. One should use a steel dilator with much discretion, in order not to tear the cervical structure. In a few instances I have used two rubber condoms, one inserted into the other so as to make it stronger, after the cervix had been sufficiently dilated to enable me to pass them through it. The end is firmly tied around the point of a Davidson's syringe, then the appliance is ballooned like a Barnes' bag dilator. This gives gradual dilatation without any risk of causing an abrasion. The only objection to this method of dilatation is that it is slower than the steel dilators. After there is sufficient dilatation the uterus should be cleaned out. If adherent particles are present they must be detached. If the entire cavity is not accessible, then a broad dull curette should be used. The uterus in these cases should be irrigated with three or four liters of a 1 per cent carbolic acid or some other antiseptic solution. Intrauterine tamponade, in my opinion, is detrimental in all puerperal cases, because the drainage ascribed to it becomes illusory after the first few hours, and then it has a tendency to retard drainage instead of having the opposite effect, as is claimed for it.

If the abortion has taken place and one has reason to believe that there are only small remnants of adherent placenta retained, which give rise to the infection, and the cervix is not dilated, resort may be had to the curette without dilating to the extent spoken of, frequently no dilatation is required. A Martin curette or a strongly-built, broad irrigating curette answers best. I wish to repeat, however, that a curette should be used only when there is an absolute indication, and not on the slightest pretext, as has been done so frequently in the past and unfortunately is still being done. The curette has done much harm by causing deaths and prolonged illness, so that I can not lay too much stress on the objection to its injudicious use. The physician who employs it must be trained, it should never be used by any one inexperienced, especially in puerperal cases, because it is a dangerous instrument if improperly handled.

To go into details regarding the treatment of the septic infections following abortions would carry me too far. I will only allude to one other class, the most serious of all so far as life is concerned—sepsis in its severest forms following abortions, especially criminal abortions. Such cases tax the judgment of the most experienced to the utmost. Let me illustrate with only one example of the many patients that I have seen and operated on with varying results.

Patient—M. S. was seen July 22, 1905, with Dr. George Doty. The patient was 20 years old and single.

History—She had had a spontaneous abortion at about the second month of gestation, three days previously. When her physician first saw her the temperature was 99. When I saw her the temperature was 102.4 and pulse 90. There was

Clinical Notes

QUININ IN PNEUMONIA *

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NOGALES, ARIZ

Following the cases of pneumonia reported in Dr Galbraith's article in THE JOURNAL Feb 10, 1906, I have had many other cases, in all of which I have treated the patients according to Dr Galbraith's method, but with a very much better result

Pneumonia is a very prevalent disease in Nogales and vicinity. My mortality in pneumonia cases was formerly nearly 80 per cent. So fatal had the disease become that all persons possessing enough of this world's goods to carry them to the sea level refused to remain here after becoming aware of the nature of their affliction. The results reported in the following cases, I am pleased to state, are the rule and not the exception. Thus far I have not had a death from pneumonia since I began the quinin treatment according to Dr Galbraith's method

CASE 1—A male, aged 24, helper on railroad

History—On January 31 he was suddenly seized with severe pain on the right side of chest, violent and painful coughing and inability to take a full breath without seriously increasing the pain over the right chest

Examination—I saw him for the first time February 1, when I encountered the following conditions. At 3 30 p m his temperature was 102 6, pulse 100, respirations 32. Breath sounds over the upper lobe of the right lung were greatly exaggerated, over the middle and lower lobes they were very faintly heard, on deep inspiration broncho vesicular breathing was heard.

Diagnosis—Lobar pneumonia, involving the middle and lower lobes

Treatment—I gave 50 grains of quinin and one hour later (4 30 p m) I gave him 25 grains more. I then ordered 15 drops of the tincture of iron chlorid to be given every three hours, beginning at 5 p m. At 6 p m his temperature was 102 8, pulse 108, respirations 30. At 7 45 p m his temperature was 100 6, pulse 112, respirations 26.

Course of Disease—February 2, at 7 45 a m, his temperature was 98 6, pulse 80, respirations 24. He made no complaints of ringing in the ears and felt well enough to sit up in bed. The pain in side had entirely disappeared. Expectoration during the night was blood tinged. When I visited him in the evening his temperature, pulse and respirations were normal. As no symptoms remained the patient was discharged.

CASE 2—F H, male, aged 14, schoolboy

History—On February 4 the patient was taken with a severe chill pain in the right side, coughing and distressed breathing. I was called to see him the following morning.

Examination—At 9 a m his temperature was 103 4, pulse 120, respirations 32. I suspected pneumonia, but the physical signs were not positive. At 4 20 p m his temperature was 104, pulse 140, respirations 36. Breath sounds over lower and middle lobes of right lung were suppressed, subcrepitant râles were present.

Diagnosis—Lobar pneumonia, involving the middle and lower lobes of right lung.

Treatment—At this time (4 20 p m) I gave him 50 grains of quinin followed by 25 grains one hour later. The nurse was then instructed to give him 15 drops of the tincture of iron chlorid every two hours.

Course of Disease—At 7 55 p m his temperature was 104 4, pulse 132, respirations 40. At 9 15 p m his temperature was 103 6, pulse 136, respirations 38.

February 6 at 9 a m his temperature was 101 4, pulse 126, respirations 30. Tubular breathing was heard over anterior and posterior surfaces of lower and middle lobes of right lung, and

percussion elicited dullness of consolidation over the same area. He expectorated great quantities of bloody mucus. Pain in the right side had disappeared. I ordered 20 grains of quinin to be given at 10 a m and at 12 noon, to be followed by 12 grains every two hours. The iron was continued every three hours. At 12 a m his temperature was 101 8, pulse 120, respirations 28, at 6 p m his temperature was 102, pulse 114, respirations 28, at 8 p m his temperature was 101 2, pulse 110.

February 7, at 8 40 a m, his temperature was 103 2, pulse 108, respirations 30. I gave him two pills of quinin, containing 20 grains each, at 9 30 and 11 30 a m. He was then given one pill every two hours until he had taken six pills, or 120 grains of quinin, during the entire day. The quinin was given in pill form because of the nausea that was produced when he took it in solution. My experience with this and with another patient has decided me never to use quinin in any other manner than in solution. The pulse being of good quality, the 15 drops of iron were given every three hours. At 2 30 p m the boy's temperature was 103, pulse 108, respirations 30, at 6 30 p m his temperature was 101 6, pulse 104, respirations 28.

February 8, at 9 30 a m his temperature was 102 4, pulse 104, respirations 26. He was very comfortable. Expectoration was bloody and physical signs of pneumonic consolidation were well marked on auscultation and percussion. Twelve grains of quinin were ordered given every two hours. At 12 noon his temperature was 102 2, pulse 102, respirations 28, at 5 p m the temperature was 101 2, pulse 86.

February 9, at 8 30 a m, temperature was 101 2, pulse 84, respirations 25. The patient complained of deafness and said that he was blind. He was able to distinguish between light and darkness, but could not distinguish objects. I therefore stopped the quinin during the entire day. The iron was given as usual. At 2 p m the temperature was 102, pulse 84, at 5 p m the temperature was 102 6, pulse 80, respirations 28. The boy's sight was somewhat better. At 8 p m the temperature was 102 6, pulse 82, respirations 28.

February 10, at 9 a m, the temperature was 103 6, pulse 92, respirations 24. The vision being normal, I gave him 50 grains of quinin at one dose and ordered 12 grains to be given every three hours. At 12 noon the temperature was 102 2, pulse 86, respirations 28. The iron was continued every three hours. At 5 30 p m the temperature was 101 6, pulse 84, respirations 20, at 8 30 p m the temperature was 102 6, pulse 90, respirations 30.

February 11, at 8 40 a m, the temperature was 102 4, pulse 86, respirations 22, at 12 20 p m the temperature was 102, pulse 86, respirations 22. The boy felt very well, he had no deafness nor disturbance of sight. The administration of 12 grains of quinin was continued every three hours. At 5 30 p m the temperature was 100 2, pulse 82, respirations 24.

February 12 (sixth day after the first dose of quinin), at 9 30 a m the temperature was 98 4, pulse 72, respirations 20. The patient had slept well during the night. He had neither cough nor expectoration. Fifteen drops of iron were administered every four hours. At 6 p m the temperature was 99 2, pulse 74, respirations 20.

February 13, temperature was 97 4, pulse 78, and the patient was discharged.

Remarks—Out of about thirty cases of pneumonia treated according to Dr Galbraith's method this was the first case showing any symptoms of quinin poisoning, i e, the profound deafness and the almost complete blindness. Fortunately, both of these symptoms passed off within ten or twelve hours, and now the boy can see as well as ever.

CASE 3—Mexican girl, aged 13

History—On February 15 the patient had a chill lasting about twenty minutes and later began to feel feverish. At the same time she felt a severe and sharp pain in her right side. Nothing was done for her and I was summoned the next morning, when I found the following conditions.

Examination—Temperature was 104, pulse 150, respirations 34. The pulse was very weak and almost imperceptible. On auscultation, subcrepitant râles were heard over the lower lobe of the right lung. Breathing was very labored. The patient preferred lying on the affected side and suffered great pain when she was turned on the left side.

Treatment—I diagnosed this as a case of lobar pneumonia and gave the first 50 grains of quinin and ordered 25 grains more to be given one hour later making 75 grains of quinin in one hour. Ten drops of the tincture of iron chlorid were administered every two hours.

Course of the Disease—At 6 p. m. the temperature was 98.6, pulse 96, respirations 24. The pulse was of very good quality. The pain had left her and the cough was less frequent. This patient never suffered from deafness.

February 17 at 9 a. m., the temperature was 98, pulse 84, respirations 20. The patient was free from cough and pain and was allowed to sit up in bed.

Remarks—In reporting a case with so prompt and effective a cure I know that many will think there must have been a mistake in the diagnosis but I felt just as certain that I was dealing with a genuine case of pneumonia as though I had seen the case go through the whole train of symptoms.

CASE 4—Mrs. C., aged 27.

History—February 2 at 2 a. m., I was called to deliver a retained placenta, the woman having one hour previously given birth to a child that had been dead at least a month. I delivered the placenta without any difficulty and, the family having engaged the services of a midwife, I left after instructing them to call me in the event of fever or any other symptom arising.

February 3 at 9 p. m. I was called to see the patient as she was suffering from a chill and cough. Her temperature was 102, pulse 140. The lochia was very scant, but of purely normal odor. I ordered a capsule containing acetanilid 3 gr. and estrated caffeine 1½ gr. to be given every two hours.

February 4, at 9 a. m., her temperature was 102, pulse 150, respirations 26. Cough was more persistent. She complained of severe pain over right lung. Her breasts, which had been tightly bandaged, were also painful. At 5 p. m. her temperature was 104, pulse 150, respirations 30. The pain on the right side was much worse and breathing was labored. Auscultation breath sounds were very harsh. Having satisfied myself by examining the vagina and uterus that there was no possibility of any infectious or poisonous process going on in the uterus, I decided to wait a few hours before giving her the quinin treatment. At 9 p. m. her temperature was 104.8, pulse 165, respirations 36. On listening to the lower lobe of her right lung I now heard the subcrepitant râles very plainly and the breath sounds over the rest of the lung were greatly exaggerated. The patient had great difficulty in breathing. I decided that it was a case of lobar pneumonia and not puerperal septicemia.

Treatment—I gave her 50 grains of quinin and followed this in one hour with 25 grains more. Fifteen drops of tincture of iron chlorid were given every two hours.

Course of Disease—On February 5 the temperature was 98.6, pulse 80, respirations 20. Pain had entirely disappeared. Several times during the night the patient expectorated bloody sputum, cough was not frequent. At 5 p. m. the temperature, pulse and respirations were normal. The patient felt fine, but remained in bed to complete the ten days following confinement.

Remarks—This case was of great interest to me from the standpoint of differential diagnosis. Under the circumstances the promptness with which the symptoms were relieved was certainly gratifying to me.

QUININ IN PNEUMONIA *

A. S. v. MANSFELDE, M.D.
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Under the caption, "Quinin in Pneumonia," in THE JOURNAL, March 3, Dr. J. B. Cutler complains that Dr. W. J. Galbraith claims originality in the use of large doses of quinin, when Dr. A. J. Giesy pursued that course in 1894.

Permit me to direct attention to page 165, vol. v, Ziemsen's "Cyclopedia of the Practice of Medicine," published in 1875, a translation of Prof. Theodore Juergensen's classic article on "Croupous Pneumonia," the disease under consideration. There he says:

"When the fever is intense, 77 grains may be given to a strong adult and 15 grains to a child under 1 year, always in one dose. I have repeatedly used both of these amounts. I have acquired my experience by gradually increasing doses, and I have never seen any harm done, in fact, it is my firm belief that even these are not the extreme limits as to quantities."

Personally I have used just this treatment for thirty years within my limited opportunities—and so much for priority. Dr. Galbraith, an old acquaintance of mine, certainly deserves great credit for bringing into prominence this old treatment of Juergensen's, which he uses exactly as I did, namely, with perfectly normal *prima via*, for the reduction of high temperatures and the resulting tone to the weakened heart muscle caused by the former. Incidentally, both used it, the former without and the latter (Galbraith) with a full knowledge of bacterial poisoning removed by the large doses of quinin. Nothing new under the sun, is there?

In this connection it may not be out of place to say that Dr. Galbraith's publication demonstrates that nihilism in the use of individual drugs simply means lack of knowledge of their proper uses, with the consequent reliance on proprietary mixtures, which only too often are void of substance and, consequently, of action. Again, is it not a pity that such masterly treatises as Ziemsen's Cyclopedia seem almost forgotten by the physicians of today? What a wealth of experience he misses!

AN UNUSUAL CASE OF SPONTANEOUS DISLOCATION OF THE SHOULDER *

JULIUS H. COMROE, A.M., M.D.
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Patient—Chas. M., white, aged 16, schoolboy.

Family History—Entirely negative.

Previous History—Other than the ordinary diseases of childhood, the patient has never suffered any serious illness. No history of traumatism can be elicited.

Present History—Since early childhood the patient has at all times been able, by means of a certain series of manipulations, which consisted, for the most part, in raising and externally rotating the shoulder, "to throw both joints out of their sockets," producing, as a careful examination revealed, a complete subcoracoid dislocation. He had also learned easily to replace the bones by a reverse movement, and in neither case was there any pain produced. At times, while engaged in active gymnastic exercises, e.g., club swinging, basketball, etc., the luxation was voluntarily produced.

During the past three months, however, he began to suffer some inconvenience when the left shoulder was either voluntarily or involuntarily dislocated, and at the same time he noticed that there was some difficulty in replacing the bone on that side. This "inconvenience" gradually grew into a dull pain, which at times was quite aggravating and the difficulty in reposition became proportionately more marked. For these reasons he was referred to me for diagnosis and treatment.

Physical Examination—The boy was well nourished, of good athletic physique. The appearance of the shoulders is characteristic. They are broad and extremely flat, due largely to the underdeveloped deltoids and the resulting prominence of the acromion processes (Fig. 1). The humeri are rather preternaturally movable, abduction bringing the arms to an almost parallel vertical position. Neither bone nor joint crepitus could be elicited. By the manipulations above detailed there is at once produced all the characteristic objective signs of subcoracoid dislocation of both shoulders, with the exception of abduction of the arms (which is present in slight degree), the outer aspects of the deltoids are flattened, the acromion processes are very prominent (Fig. 2), the normal position of the tuberosities below the latter are now occupied by hollow spaces, into which the tips of the fingers can be easily slipped, the humeral heads can easily be palpated in the axilla, and in forced extension can even be seen.

I made a very careful fluoroscopic examination, which was

* See Editorial on page 804.

* Read before the York County (Pa.) Medical Society.

also seen by Dr W F Bacon, chief surgeon of the York Hospital, and by Dr L M Hartman. In the normal state there appeared to be no gross anatomic malformations in the bony structures of the joint, with the possible exception that the glenoid cavities were more shallow than those of several others which the author examined for comparison. The capsular ligaments, however, could be very distinctly outlined with a medium tube, and the left one was unmistakably larger than its fellow on the opposite side. The latter produced a homogeneous picture, whereas the former (the left) appeared much darker centrally, as though an obstructive fluid was present, probably an inflammatory exudate from the synovial membrane. This would easily account for the subjective symptoms on the left side (subacute synovitis, with exudate) and their absence on the other. The bones were voluntarily dislocated before the fluoroscope, and their course was seen to be downward, forward and upward, the head reposing immediately below the coracoid process, with the lesser tuberosity being anterior, showing, therefore, that external rotation had taken place. In this new state it appeared that the head of the bone was lying in an abnormally large pouch, as it were, which was the chronically enlarged capsular ligament. The bones were replaced in the exact reverse order.



Figure 1

Treatment—I advised encasing the left shoulder in a Velpeau fixation dressing and continuing treatment as in an acute traumatic luxation. This was advocated for the double purpose of 'fixing' the joint and at the same time of producing absolute rest for the inflamed surfaces. For the right shoulder I advised massage, passive motion, and regulated, gentle gymnastics, to improve the muscular and ligamentary tone. I also recommended that in about six or eight weeks the proceeding that proved most beneficial should be further practiced on both sides.

I could find no other similar case of double dislocation purely spontaneous, in medical or surgical literature.

According to DaCosta spontaneous (pathologic or consecutive) luxations are usually present in a joint which has been disabled by some preceding or existing form of disease e g, chronic synovitis, tuberculous disease, rheumatoid arthritis, and at times in severe typhoid infections. In other words it is neither traumatic nor congenital. When the *Typhoid bacillus* is responsible for the infection the hip is the joint most frequently attacked (with luxation) and the most frequent type it

assumes is posteriorly on the dorsum of the ilium. The latter form is at times not recognizable until convalescence, and its reduction is often very obstinate. In Charcot's disease, spontaneous dislocations are rather common, the joints most frequently attacked being the knee and the hip, in the order named. In this latter pathologic condition, there is a more or less rapid destruction of all the joint constituents, with softening and marked relaxation of all the ligaments, thus permitting a greater range of motion and favoring dislocation.

The treatment in these pathologic luxations, when resolution does not set in, consists in the application of suitable apparatus or in resection as a final resort. I am of the opinion that these pathologic luxations should not be referred to as "spontaneous," and that the latter term should be restricted to those cases in which no congenital, traumatic or pathologic etiologic factor can be ascertained.



Figure 2

HUMERUS

Unilateral spontaneous luxations of the shoulder are not infrequent, due to the very shallow glenoid cavity and to the great mobility and exposure of the joint constituents. They are invariably anteriorly dislocated, since there are no powerful muscles to impede the course in this direction. The subcoracoid variety is the most frequent, as, to become a subglenoid dislocation, the powerful triceps tendon must be ruptured, and this is rarely accomplished, unless as a result of violent traumatism. In these cases of spontaneous dislocation of the shoulder there must be a movement of extreme abduction, which causes the acromian process to strike on the neck of the humerus and thus to tilt the bone out of its socket, the acromian process acting as a fulcrum, the distal portion of the arm as a long lever and the portion of the humerus between the tuberosities and the head as a short lever. It is therefore, a disturbance of leverage essentially, that produces a spontaneous dislocation.

SYMPTOMS

The characteristic appearance of the patient, so well described in all text-books, is, in a large number of cases, pathognomonic of the condition. In addition, the head of the humerus is readily felt in the axilla, and when the arm is actively raised up it may even be seen as a tubular prominence, the prominence of the shoulder no longer the greater tuberosity of the bone but rather the acromion process since the head is pushed under the coracoid process, causing the absence of the characteristic roundness and the substitution of the flattened shoulder, the deltoid is naturally stretched down from the acromion to the middle of the shaft of the humerus externally, and this tends to throw the elbow out from the body. The elbow can not be brought to touch the body (Dugas' sign), since the head is wedged in between the acromion and coracoid processes.

TREATMENT

If spontaneous reposition can not be accomplished, Kocher's method will prove successful in most cases. If not one of the many modifications variously described will invariably suffice. In rare instances, however, this is found to be impossible, when excising or wiring (Beck) must be resorted to. At the same time the hygienic condition of the patient should be carefully regulated and the general health improved so as to reinforce the weakened joint. Two patients with persistent spontaneous unilateral dislocations of the shoulder were operated on by Ricard with success. His method is to expose the front of the joint by an incision between the deltoid and pectoralis major, and a second incision from the upper end of the first outward along the margin of the acromion. The inner portion of the capsule is now pinched into a transverse fold, and several vertical sutures placed so as to include the tendon of the subscapularis below and the thick capsule above.

A CASE OF DOUBLE UTERUS

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I wish to report a case of double uterus. I first saw the patient one year ago, when called to determine whether she was pregnant or not. She had been married five years without becoming pregnant, but had not menstruated for five months and now thought she felt motion. She called me in because the tumor seemed to be all on the left side.

On making a vaginal examination, I found the vagina divided by a septum, and at the upper end of each side of the vagina a cervix and uterine cavity. As the patient was certainly pregnant, I could not use a sound. She was pregnant on the left side. The finger passed naturally up the right side and was with difficulty passed on the left side. I asked her if she knew that she was different from other women and she said no, but on further questioning I found that both she and her husband knew of the condition, but did not know that it was different from other women. She miscarried one month later and sent for me, but, as I was away from home, she had no physician.

She miscarried again, at nearly four months, two weeks ago. I was called in four days afterward and found a retained and putrid placenta. She thought she had passed something from the right side two weeks previously, and stated that the fetus came from the left side. I removed the placenta and she is entirely recovered.

On examination I found that I could introduce one finger in each cervix at the same time. I examined the inside of the left uterus, digitally, and am convinced that there is no connection between the two cavities. There is now a rupture of the septum close to the uterus large enough to admit the tip of my finger, so that I could pass the finger up the right side of the vagina and feel the left os as well as the right. I think there is no doubt, from the conditions, that intercourse always took place on the right side, but that the right side is rudimentary, or infantile, and that conception could not take place on that side, and that it was very unlikely that the semen entered the left side.

At the first examination I found it difficult to introduce the finger into the left half of the vagina on account of the small opening, and I am reasonably certain that the male organ had never penetrated that side although the left half of the vagina was roomy enough when once entered. At the second examination, I found the same condition, except that the opening was larger and that there was also a laceration of the upper portion of the septum. At this time the finger, passed straight in, would always enter the right side of the vagina, and my theory is that the right half of the uterus is rudimentary and that only after five years of married life the semen was accidentally introduced into the left half. The septum was probably torn when the miscarriage occurred, thus accounting for the second impregnation. I think the probability is that she will never carry a fetus to term, on account of the right side of the uterus not dilating or entering into the physiologic growth of the gravid uterus. This case corroborates the statement generally made that abortion frequently occurs in cases of uterus didelphys.

AN ISOLATED CASE OF FRIEDREICH'S ATAXIA *

ARTHUR H. DODGE, M.D.
PHILADELPHIA.

The following case of Friedreich's ataxia presents nearly all the symptoms of the disease, according to the synopsis of Soca and Ladame, except the familial feature. Although this familial tendency is usual, cases in which direct inheritance can be traced are rarely observed. The cases of Gowers, Osler and Carre are instances. Isolated cases are far from rare and have been reported, showing nothing more of note than the sporadic occurrence.

Patient—J. M., aged 24, single white, male.

Family History—Mother is living, aged 60. Father died as the result of an accident at the age of 55. Parents were not related, and no nervous disease of any nature is known in the family. The father was an alcoholic. Alcoholism in parents has been spoken of as an important etiologic factor. Friedreich in his first cases insisted on the causal relationship of alcoholism in parents to this disease. The case of Vizioli was unique in this particular. Our patient was the youngest of six children. Three brothers died in childhood, two the result of measles and one from a severe burn. A brother of thirty years and a sister of twenty-seven are living in good health and show no signs of a similar affection, and they are likely to be free from this disease according to the observation of Soca that the onset of the disease commences at the same age in members of the same family.

History—The patient was admitted to the nervous wards of the Philadelphia Hospital, in Dr. Lloyd's service, May 13, 1905, stating that the onset of his trouble was noticed after an

* From the service of Dr. James Hendrie Lloyd in the Philadelphia Hospital.

attack of influenza at the age of seventeen. The first symptom was unsteadiness and uncertainty in walking. The gait progressively became worse, and his friends noted its resemblance to a drunken man's gait. The patient frequently had to take hold of surrounding objects to prevent falling. Unsteadiness of much less extent was noticed in the upper extremities at about the same time. Three years after the onset of the disease the patient ceased walking. At no time has the patient had any pain, and the function of the rectum and bladder has been normal, except on one or two occasions when he has noticed a delay in starting his urine. The patient denies all illnesses except the milder diseases of childhood, and evidence of syphilis is wanting. He admits a free use of alcohol after the onset of his disease.

Examination—The patient is confined to a chair, but needs no help from anyone to get to and from his bed nor does he require help in dressing. The facial movements are well performed. The hair is plentiful, black in color but profusely streaked with grey hairs. The pupils are equal and react promptly in convergence. Direct and consensual light reflexes are prompt. The visual fields are not contracted, and the ocular movements are normal. There is nystagmus of prominence on lateral deviation of the eyes. Examination by Dr. Hansell, May 19, 1905, showed the eye grounds to be normal. There is nearly constant oscillation of the head, resembling the motions used to signify yes and no. This motion is increased in frequency and amplitude when the patient is watched, also while he is talking. Speech is slow, hesitating, jerky, thick and slightly slurred, but not truly scanning. The mentality of the patient is good and there seems to be no change according to the statement of his brother. The heart and lungs show nothing abnormal. The urine contains no abnormal constituents. Strength in the extremities is well preserved. The grip in the right hand is 42 and in the left 39 on the scale of the dynamometer. There is no atrophy. The limbs are not spastic. Muscle sense is intact. Sensation over the entire body is normal. No pains of any character. Bladder, rectal and sexual functions about normal. Ataxia is present in the hands and arms to a considerable degree, but the ataxia in the lower extremities is more marked. The patient walks with support, and in doing so places the feet widely apart, and the legs are thrown about in a helpless manner. While the patient is standing the head and trunk sway very much and the patient presents the attitude of a man very drunk. The closure of the eyes causes no increase in the swaying, but it is difficult to say whether the swaying could be increased. There is antero-posterior curvature of the spine in the cervico-dorsal region but no scoliosis. The feet are shortened from before backward, and the arch is greatly increased. The toes are dorsally flexed, especially the great toe, and the extensor tendon of the great toe is prominent. There is not the flexion of the distal phalanx which is usual.

The knee jerks and Achilles jerks are absent. The biceps and triceps jerks are present and about normal on either side. The cremasteric and epigastric reflexes are present. The presence of the Babinski reflex in Friedreich's disease is not usually spoken of with any degree of clearness in either the text books or reported cases. In this case the Babinski reflex is very prompt and active on either side. In some of the text books the Babinski reflex is spoken of as constantly present in this affection. In two other cases now in the Philadelphia Hospital in a brother and sister, the Babinski reflex is absent, but these cases have advanced into the paralytic stage of the disease.

Course—Nov. 1, 1905.—The course of the disease has been progressively downward. The speech defect and the nystagmus are more pronounced. The ataxia is greater, especially more marked in the arms since admission, and the arm reflexes are lessened. The general health is not so good as on admission.

DISCUSSION BY DR. LLOYD

The differential diagnosis of Friedreich's ataxia offers no special difficulty, unless it be with reference to multiple sclerosis. But in Friedreich's ataxia the onset of the disease with ataxia in the lower limbs, the abolition of the deep reflexes, especially the knee-jerks, the ab-

sence of spasticity in the muscles, the absence of optic atrophy (occasionally seen in multiple sclerosis), are all significant of Friedreich's disease. The so-called cerebellar hereditary ataxia of disease, in which there are increased tendon reflexes, paralysis of ocular muscles, with disorder of sight, is not thus far a distinctly differentiated disease and is so rare as hardly to lead to a confusion with the true Friedreich's ataxia. There is a type, however, of hereditary, or at least congenital, ataxia paraplegia which deserves mention. In this disorder there is ataxia with some spasticity and actively increased knee-jerks, also disorder of speech, such as stammering, jerky enunciation, with or without nystagmus, etc. This is sometimes found in children who have suffered injury at about the time of birth, and is thus in no sense either a familial or a hereditary affection.

New Instrument

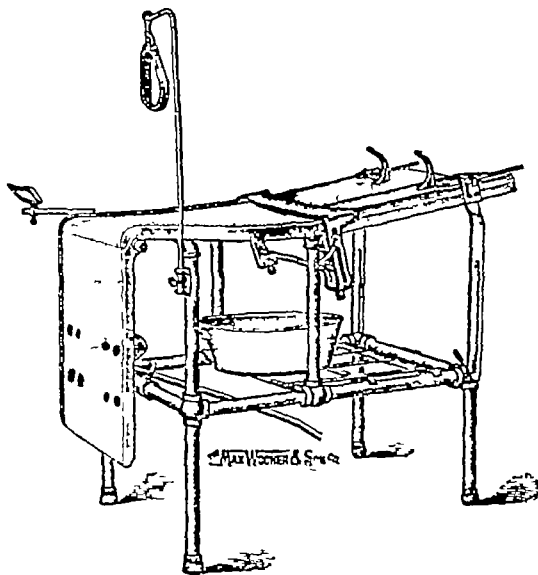
A NEW OPERATING TABLE

REVISED AND IMPROVED

J. F. BALDWIN, M.D.
COLUMBUS, OHIO

About five years ago a description appeared in THE JOURNAL of a new operating table which I had devised after several years of study. Daily use of the table demonstrated, however, the existence of two or three weak points, which have finally been eliminated, and several new features have been added, and now the table seems to be about perfect.

The main points of the table, as first presented, and which are retained, are: 1. Simplicity of construction. 2. The field of operation not changing when the patient is put in the Trendelenburg position. 3. The position of the patient quickly



and easily changed by the anesthetist. 4. The patient maintained in the Trendelenburg position by shoulder straps, or (as I prefer) by tying the legs to the leg piece.

The recent improvements add the following points: 5. The leg extension piece automatically drops to the proper angle when the patient is placed in the Trendelenburg position. 6. The bridge, by which the patient is arched forward as desired in kidney, gall bladder or stomach work, maintains its position without catch of any kind and can be raised or lowered from either side. 7. The copper hot water reservoir (electrically heated, if preferred), to keep the top of the table warm if desired for protracted operations on feeble patients.

The illustration shows the usual glass top, but I much prefer metal.

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SATURDAY, MARCH 17, 1906

QUININ IN PNEUMONIA

In the high and dry regions of Mexico and the southwestern part of our own country, pneumonia has long been dreaded by physicians because of its frightful mortality. It is to be hoped that the reports concerning the treatment of this disease by large doses of quinin, as advocated by Galbraith¹, may continue to be encouraging. We have no desire to throw cold water on this method of treatment. We shall gladly open our pages to careful reports along this line and trust that the good reports from the southwest may be substantiated by experience in other parts of the country. Yet we wish to call attention to two or three facts that should be borne in mind.

In the first place the use of large doses of quinin in pneumonia is not new. It has been given a thorough trial. It has not proved a specific in other hands. As Dr. Mansfeldt says in his communication Juergensen thirty years ago advocated its use in large doses (77 grains) giving this amount in one dose as an antipyretic—and often repeating this dose in 18 hours—but seeing also an improvement in the condition of the pulse, respiration and nervous state of the patient. Juergensen, however, made no claim that quinin was a specific, and his death rate was between 10 and 20 per cent.

Again, this same clinician uttered some truths concerning pneumonia that will bear repetition to-day. We quote from the same article in Ziemssen's Cyclopaedia: "When we realize that we have to combat not an 'inflammation' but rather a constitutional disease, and one, moreover, of comparatively short duration, we readily fall into an expectant treatment which bides its time, interferes only when necessity requires, and does not see in the mere name of the disease an indication for attack."

And in another place he says it is right to "do almost nothing for, say, 80 per cent of the cases, and to employ the most active treatment for the other 20 per cent."² The lessons of the self-limitation of acute infectious diseases is a hard one to learn. It is difficult to realize that from 60 to 80 per cent of pneumonia patients will recover if let alone, and in selected cases where the extremes of life are excluded, as well as individuals who

are weakened by previous disease, the mortality is low. Petresco's³ results—a mortality of about 2 per cent—from the use of enormous doses of digitalis, illustrate this, his patients being young soldiers in whom previously existing disease of heart, kidney, etc., had been excluded by rigid physical examination at the time of admission to the army. In private practice it is no uncommon thing for a busy physician to treat 40 to 50 consecutive cases of pneumonia by the so-called expectant or symptomatic plan, and to have no deaths. And another phenomenon of not infrequent occurrence is an apparent abortion of a pneumonia or an early crisis. Crisis on the third day of pneumonia while not common is by no means a remarkable rarity. These facts carefully considered should make one hesitate about ascribing the recovery or even the early recovery to the particular drug that has been given.

Before conclusions are drawn there should be no weak points in the diagnosis. Pleurisy, bronchopneumonia, bronchitis, influenza, malaria, etc., should all be carefully ruled out. Some of the cases reported are not, to judge from the records, conclusively pneumonia. To cite an example, Case 4, in the report by Dr. Gustetter in this issue, might well be pulmonary embolus following parturition. And in not a few other reported cases the diagnosis is not always above criticism.

While therefore we welcome any careful clinical observation that will help to a better understanding of the treatment of the all too prevalent and fatal pneumonia, we would call attention to the fact that the treatment by quinin is old and has once been discarded, that results to be convincing must be based on the observation of a considerable number of cases in which the diagnosis is indisputably correct, and that the fact must not be overlooked that the great majority of patients under the age of 50 or 60 will recover under any plan of treatment if it be not harmful.

BEDBUGS AND DISEASE POSSIBILITIES

Though the bedbug has been known as an extremely unmanageable pest of humanity almost as long as history runs, very little has been ascertained with scientific definiteness regarding its habits and life history until recent years. Somehow the very thought of the insect and certain objectionable features that it is known to possess, such as its defensive as well as offensive odor, have deterred students from taking up the investigation of its life cycle, though its anatomy was very thoroughly studied over twenty-five years ago by Landors and others. In recent years the possibilities of the conveyance of diseases of various kinds by means of this insect parasite have been recognized and renewed interest has been aroused in everything that concerns it. For example, in smallpox epidemics, the spread of the disease through cheap lodging houses is more fre-

¹ Galbraith. THE JOURNAL A M A, Jan 28 1905, and Feb 10 1906. See also reports by Gustetter in this issue p 799 and by Cutter, March 3, 1906, p 671.

² THE JOURNAL A M A, March 17 1906 p 800.

³ Ziemssen's Cyclopaedia, Translation N Y 1875, p 149.

⁴ Proceedings of XI International Congress in Rome

quent than through any other means, and the houses in which bedbugs are found seem to furnish a steady supply of victims. This impression was renewed during the recent epidemic of smallpox throughout the United States and Canada. On at least one occasion tubercle bacilli have been found in the blood of the bedbug, and, as in this case a brother of the patient, who had occupied the same bed, had died from tuberculosis, and another brother suffered from a severe and rapidly running form of the same disease, there was more than a suspicion that this parasite was a distributing agent for the disease. There is a definite tradition in Russia frequently repeated by Professor Metchnikoff, in his lectures at the Pasteur Institute, that the bedbug forms an intermediate host or is at least an agent for conveying intermittent fever, so common in certain districts of that country. Its possibilities in the rôle of intermediary in cerebrospinal meningitis are still the subject of investigation.

In these circumstances all possible information with regard to the pest is interesting, and consequently a leaflet issued by the Department of Agriculture should attract attention. This pamphlet is written by Dr. Girault, who has carefully followed the life history of *cimex* or *clinocoris*, as the insect is variously called in scientific nomenclature, and has found important new material with regard to its feeding habits. The adult insect feeds about once in from thirty-six to forty-eight hours, taking nearly fifteen minutes to get its fill of blood. At earlier ages the feeding period is much shorter. Except in susceptible human beings who have a decided idiosyncrasy, no local effect at all is produced by the feeding process. Some individuals, however, suffer from almost intolerable itching and have a series of urticaria-like lesions. The parasite is so prevalent in certain parts of the country, however, that it is evident that those with an idiosyncrasy are comparatively rare. The insect may live from five to ten weeks or even longer without any food. This is especially true during the winter, when, if they have no food, they go into a sort of comatose condition. While each insect seems to live not longer than about 100 days at the outside, some have been known to exist as long as eight months, and it is these that enable the species to continue its existence even under unfavorable circumstances, so that they live from season to season in lumber camps, summer residences, empty apartments and the like.

Another interesting phase of investigation with regard to the bedbug and its connection with disease was carried on by Drs. Girault and Strauss as to whether or not the insect had other host relations besides those with the human race. As is easily understood, the host relations of this insect are greatly increased in importance because of their scope in the potential transmission of disease if they attack other animals than man. It has been found experimentally that at least mice, both living and dead, are attacked by bedbugs and that young mice particularly seem to provide an excellent

supply of food for them. This observation has been confirmed by observations made by Drs. Girault and Strauss, and, as it seems not unlikely that other small animals, including even rats, may also be hosts, the spread of such affections as pest, mouse septicemia and the like by means of this parasite must be taken into account. In a word a new department of disease etiology seems to be opened up by these observations.

THE NATURE OF ECLAMPSIA

Eclampsia has been designated the "disease of theories." Because of the large number of hypotheses advanced to explain this condition, we infer that none is adequate, and such, indeed, appears to be true. In early times eclampsia was looked on as a disorder of the nervous system manifesting itself by a proneness to convulsions due to a less stable equilibrium of the nervous centers during pregnancy. Lever identified eclampsia with uremia. Spiegelberg said that the occurrence of ammonium carbonate in the blood was responsible for the convulsions. The Traube-Rosenstein theory explained eclampsia as a result of edema and anemia of the brain. Bacterial infection has been held as the etiologic agent by many, especially by the French, and several organisms, isolated from cases of eclampsia, have been described. Perhaps an equal number of observers have obtained negative results in this respect, and this fact, together with the lack of uniformity in the positive findings, leave this theory unsupported by direct proof. Riviere's theory of auto-intoxication was, for a time, considered favorably by many. He claimed, and this was substantiated by others, that during pregnancy there occurred in the blood an accumulation of a toxic substance, while coincident with this the urine became less toxic. Later work by Volhard, Stewart and others demonstrated the fallacy of these results. Others claim to have found substances such as leucomains and large amounts of globulin in the blood serum, these findings also lack confirmation.

The fetal origin of the possible causal toxic substance has been much discussed of late. The fact that lesions identical with those of the mother have been found in the fetus, together with the occurrence of convulsions in the child after birth, have been used as an argument in favor of this idea, but, as Williams states, the evidence does not indicate whether the toxins pass from the fetus to the mother or in the opposite direction.

The clinical manifestations and the morbid anatomy indicate that in all probability there is some toxic substance in the circulation which gives rise to the familiar degenerative changes found in the liver and kidneys and often in other organs. At least from what we know concerning the causation of such lesions as thromboses in the liver, necrotic changes in this and other organs, acute nephritis and the like these changes are more rationally explained on this hypothesis than on any other. Wells¹ recently attempted to explain several conditions

¹ THE JOURNAL Feb 3 1906

MARCH 17, 1906

by placing it in the hands of several men, it gives a splendid chance for the manufacturer to bring influence to bear, for it is well known that the greater the number the less the responsibility on each individual and the more opportunity for influence. We believe, however, that this particular provision will be modified when the attention of the House is directed to its danger.

"THE PHARMACOPEIA FETISH AND OTHER THINGS"

In its issue for March 10, under the above caption, the *Medical Record* comments on the papers, and the discussion following, presented at a medical meeting in Boston last January. It sadly abuses Dr Billings,¹ who read the principal paper, but it does not reprint for the benefit of its readers what Dr Billings said, since it could quote scarcely a paragraph without affecting some of its advertising patrons. Dr Billings' paper is referred to as being practically the same as the one read at Portland, whereas entirely different phases of the nostrum evil were discussed. As we printed the article last week, however, our readers can judge for themselves of the merits of the article. They can also see whether or not Dr Billings advocated the limitation of the use of medicines to those in the Pharmacopeia.

One of those who took part in the discussion is highly praised, because "he drew a sharp line of distinction between quack medicines exploited in the lay press and the secret pharmaceutical preparations advertised only to the medical profession—a distinction which is persistently ignored, to the detriment of pharmaceutical reform, by THE JOURNAL of the American Medical Association and its Council on Pharmacy and Chemistry." We regret that this allegation—so far as it refers to us—is correct. It is too bad, but we are not able to draw "a sharp line of distinction" between "patent medicines" and "the secret pharmaceutical preparations advertised only to the medical profession." We certainly can not draw this line, unless the *Medical Record* admits "patent medicines" to its advertising pages, which, of course must not be thought of for a minute. And yet, as we turn to the advertising pages, we find Scott's Emulsion, Antikamnia, Syrup of Figs, Pond's Extract, Hydrozone, etc. When a nostrum is advertised to the public, we usually designate it as a "patent medicine," but when it is advertised in "ethical" medical journals we call it a "proprietary." To which class do these preparations belong? Where and what is the "sharp line" here? Kutnow's Powder, Vin Mariani and Angier's Emulsion are advertised in the lay journals in England but we can easily see the 'sharp line' here—the Atlantic Ocean.

No, honestly, we can not see the "sharp line of distinction" not only as regards the method of advertising, but also as regards the general character of "secret proprietaries" and "patent medicines."

We are then given this unvarnished truth

"If medical men will refuse to prescribe remedies the composition of which is unknown, the 'nostrum evil' will be at an end. But the physicians of this country are, as we have said before, not babies to be guided by a certain coterie of pharmacologists and therapeutic nihilists—a queer combination—whose slogan is, Back to the Pharmacopeia! and who seem to think that the way to reform the manufacturers of proprietary remedies is to class them with the makers of quack medicines."

This sounds very familiar, so much so that we are almost persuaded that it was written by a member of the Press Committee of the Proprietary Association of America. That committee tells us that if people did not want "patent medicines" they would not buy them, that the public is not made up of a pack of fools. And this all sounds so convincing, so absolutely unanswerable. But when this "argument" is used by the "patent medicine" men's press bureau the reply is made that the public is deceived and misled by the advertisements, and that the newspapers, the source of information for the people, are suborned by the "patent medicine" men and will not permit anything to appear against "patent medicines," and consequently the public is kept in crass ignorance of the actual facts and conditions. Is it possible that many medical men are also misled, because the medical journals, like the newspapers, are controlled by proprietary men? Banish the thought, at least so far as the *Medical Record* is concerned.

But, come to think of it, when the Council on Pharmacy and Chemistry showed that several of the preparations which the *Record* was carrying in its advertising pages were fraudulent, the *Record* did not inform its readers about it. And when, later, a letter containing the information was sent to the *Record*, it politely refused to publish the letter. The Commission on Anemia in Porto Rico, we are told, sent to the *Record*, for publication, a communication in which the commission gave proof that the vendor of Pepto Mangan had reprinted a part of its report, garbled in such a way as to make the ordinary reader believe that Pepto Mangan had proven satisfactory to the commission in the treatment of uncinariasis, whereas the report showed the opposite. Did the *Record* publish the communication? Not that we have seen.

Incidentally, it looks as though the *Medical Record* was not giving its readers the square deal.

One more quotation. "The *Medical Record* is heartily in favor of pharmaceutical reform, but it despairs of any progress so long as the cause is in the hands of the foolish and discordant Chicago missionaries." The word "discordant" is very good. We realize that this movement is discordant—it could not very well be otherwise.

¹ We quote a sample. Dr Billings seems however to be a rather recent student of the good book [the Pharmacopeia] for he expresses sorrow that acetanilid "was made official in the last

Pharmacopeia, apparently unaware that it has been official for ten years. What Dr Billings said was that he was sorry that acetanilid was made official in the last Pharmacopeia as *Pulveris acilii Compositus*. He certainly knows that acetanilid was official in one of our earlier editions. His regret echoes that of Jacobl. Solle, C. B. and his co-workers that the Pharmacopeia has made acetanilid official in the form of a mixture as a substitute for the nostrums of the antihumane class.

But if the *Record* is really in favor of pharmaceutical reform and does not like the methods that have been adopted by the American Medical Association, and which have been endorsed by medical societies all over the country, why does it not give definite reason and suggest a better way? The *Medical Record* in favor of pharmaceutical reform? Is it possible so long as the greater part of its income is derived from such advertisements as Gray's Glycerine Lotion, Compound Peppermint, Anger's Emulsion, Scott's Emulsion, Antikatarin, Kutnow's Powder, Seng Phenalgin, Salacotin, Mergal's Medicated Urethral Wafers (a product of the Peppermint Cure people), Cactina Pills, Chronic Neurasthenia, Neurilla, Germicidin, Bromidia, Doan's Balm, Tongaline, Anasarin, Pond's Extract, Sannito, Ichthol, Iodine, Papine, Eusoma, Echitone, Ammonol, Nutrolutis, Roberts-Hawley Gout Lymph Compound, etc.? If so in what way would it suggest that reform be instituted? It acknowledges that something should be done. Will it suggest what? If the investigation of each proprietary article by men competent to do the work, the results of this investigation to be published later, is wrong, will the *Record* suggest why?

If it is ignorance on the part of the *Record* that impels it to confuse the real issue by intimating that the movement means limiting physicians to the use of those preparations which appear in the *Pharmacopeia*, we will enlighten it by saying that it is mistaken in its premises. If the movement means the limitation of the use of medicines to those which appear in the *Pharmacopeia*, it would be very foolish to spend money in the investigation of preparations that are not in that book and in the publishing of the book to be known as "New and Non-official Remedies."

We are very glad that the *Record* has spoken. We hope it will speak again. A free discussion of this nostrum question will do good. Let us have more of it. Publicity is what is wanted. Let us give the physician a square deal, however, by publishing all the facts.

ERA OF THE PHONOGRAPH

In one of Mr. H. G. Wells' ingenious fancies he shows up a future condition of the world's progress—a very unpleasant one it must be said—in which books have had their day and literature is perpetuated by phonographs or what are called the "babbling machines." While no one would wish to realize the future he portrays, it is easy to see how great an advantage to a certain limited class of unfortunates would be the application of this particular feature. This point is specially suggested by Dr. George M. Gould in a communication to *Science*, in which he shows how large a world it would open up to the blind were this plan adopted, especially with the more recent improvements made in the so-called telegraphophone of Poulssen, which is said to be far superior to the modern phonographs and graphophones now in common use. The suggestion is still too recent to have been thoroughly carried out but it will be strange if we

do not see some fruits of it in the adoption of such methods in the education of the blind in public institutions. The method necessarily has its limitations, and it may not entirely supplant, as he seems to think it will, the raised or embossed letter method used in books for the blind. But in any case it seems to indicate greatly enlarged possibilities of pleasure and profit for a deeply affected class.

THE BANQUET PERIL

Several years ago THE JOURNAL had occasion to call attention to certain dangers incurred by banquet orators as specially illustrated by one or two notable instances. The dangers of public banquets do not appear to be entirely confined to those who have to undergo the cerebral congestion involved in after-dinner speeches. From time to time we hear of deaths occurring among those who took no prominent active intellectual part, and it is perhaps not too much to say that we are becoming somewhat accustomed to such casualties. In the city of Chicago alone one of the most prominent and public-spirited citizens succumbed not long since to the effects of an apoplectic attack incurred on such an occasion, and at a late Washington birthday banquet at one of the leading clubs two prominent citizens had to be carried out, one of whom has since died. There seems to be a sanitary question here involved that is worthy of consideration. While such serious casualties occur only among a very minute percentage of those actually present, there can be little doubt that the accompanying conditions have much to do with their production, and the question arises why they should occur at all. The participants in these banquets are men in the prime of life or past it and many of them are at a critical age or are suffering from arterial or cardiac disease and, therefore, in a physical condition favoring such accidents. They partake, however, of a hearty meal at a late and often unaccustomed hour under more or less exciting conditions, and often sit for hours in a more or less vitiated atmosphere, all of which are possible factors of sudden breakdown. In the social functions called "smokers," which have medical sanction in that medical men largely engage in them, it is easy to see how all these conditions may be aggravated. We must consider, also, that the glaringly evil effects are very probably not all that actually occur. There may be much suffering and perhaps some mortality that are really due to such occasions, though perhaps not properly credited and certainly not brought prominently before the public. The community suffers even by the loss of a very few valuable lives, and there is certainly in this matter an opportunity for medical consideration and prophylactic intervention in some way.

MODERN LONGEVITY

According to William Curtis, the well-known newspaper correspondent, the actuaries of the large life insurance companies do not consider that the length of human life is increasing in the present conditions of our civilization. Admitting that there has been an improvement in the mortality of infants in the large centers of pop-

ulation this has not counterbalanced, in their opinion, the deteriorating influences acting on the vitality of those of riper years. Moreover, by the preservation of the weaklings in infancy the death rate in more advanced life has been increased, and this with the modern tendency to urban concentration and the intense strain of modern life has tended to decrease the average of longevity in spite of better sanitary conditions, the triumphs of medicine and surgery, the higher standards of living, and all the other conditions that might seem favorable to the prolongation of existence. While the death rate from diseases such as phthisis, and certain obviously preventable disorders like typhoid, has probably decreased, the increased mortality from heart troubles, kidney disorders, cancer and pneumonia, has more than made up the difference. It must be remembered, however, that the statistics of the large life insurance companies do not cover the whole population, but only a certain selected and provident class, and probably just that class that is most subjected to the high tension conditions of our modern civilization. It is not difficult to suppose that this class is perhaps of all others the least generally influenced by modern sanitary advances, and in making an estimate of the general average the figures it gives may be somewhat misleading, no matter how reliable they are for the special class they represent. The testimony of life insurance actuaries, however, can not be disregarded altogether as a warning against certain existing tendencies affecting the vitality of our population. Increasing luxury and speculation have much to account for what is ordinarily and superficially attributed, perhaps too exclusively, to the strenuous life. It is not hard work that kills so much as bad habits and neglect of ordinary hygienic living which no public sanitation can entirely counteract. That occupation itself is a life-saving factor is shown by the frequent rapid decline of health and early death in individuals who have retired from active business. Civilization saves the weaklings and interferes with natural selection and survival of the fittest, but it is not the struggle for life that is in itself most fatal. As a philosophic humorist has said with much truth "Work is a snap. It is the intermissions that do up the nervous system."

A SERIOUS JOKE

The newspapers last Sunday contained the announcement that Dr Gregory, a member of the Legislature of Iowa had introduced a bill authorizing the putting to death of incurables, idiots etc. While we understand that the Doctor believes to a certain extent in the principles underlying the measure, he did not introduce it himself but some other member did more as a joke than anything else. The jokers had sent out their "story" in advance and as a result Dr Gregory has made himself famous. The bill was never considered seriously by the members of the Iowa Legislature and it was withdrawn because, as our reporter remarks, its sponsors could not stand the severe criticism pouring in from all parts of the country.

Aortic Regurgitation in Childhood.—Dr David Officer says that the cause of aortic regurgitation in children is nearly always vegetations resulting from endocarditis of rheumatic origin.—*Intercolonial Medical Journal of Australasia*

Medical News

CALIFORNIA

Tuberculosis Placarded.—The town of Selma has added tuberculosis to the list of diseases declared to be communicable and dangerous to the public health.

Expelled from Society.—Dr John J Gaynor, Eureka, was found guilty of unethical advertising and solicitation of obstetrical cases, February 13, and was expelled from the Humboldt County Medical Society by a vote of 14 to 1.

Election of Officers.—The Pomona Valley Medical Society, a branch of the Los Angeles County Medical Association, has elected Dr Frank W Thomas, Claremont, president, Dr Clarence G Toland, Pomona, secretary, and Dr Frank Garcelon, Pomona, counselor.

Dr Baruch Only a Volunteer.—Dr Simon Baruch notifies THE JOURNAL that he has not taken charge of the new bathhouse at Paso Robles, as he has neither the legal authorization nor the desire to practice medicine in California. His mission is simply that of a volunteer to organize a national health resort which will pay special attention to hydrotherapy and balneology.

Annuls Action of State Board.—The Supreme Court has annulled the action of the State Board of Medical Examiners revoking the license of "Dr" Jessie C Hewitt, Los Angeles, who advertised a cure for cancer. The court annulled the order of revocation on the ground that the medical law is vague, indefinite and uncertain.

Prohibits Distribution of Samples.—The board of trustees of Selma has passed an ordinance providing that any person who distributes samples of any patent or proprietary medicine in the town, by delivering samples or small quantities thereof to minors, or by leaving samples or quantities thereof on the streets or in the yards, or in and about any buildings of said town, or who advertises any medicine or drug of medicinal preparation, by leaving samples or small quantities thereof, where the same are likely to fall into the hands of or be picked up by any minors in said town, shall be guilty of a misdemeanor.

Personal.—Dr Robert F Rooney of Auburn is ill with pneumonia.—Dr H M Cox has been reinstated as physician of San Luis Obispo County, vice Dr Joseph S Jackson.—Dr Henry M Fine, Oakland, has succeeded his father, Dr Andrew Fine, as examiner for the United States pension bureau.—Dr J Myles Crenshaw, Redlands, has resigned as physician of San Bernardino County and his place has been filled by Dr Paul S Anderson, San Diego.—Dr Eli A. Kusel has been made a member of the board of health of Oroville.—Dr and Mrs George M Converse, San Francisco, will attend the International Medical Congress in Lisbon and spend several months in travel in Europe.

CONNECTICUT

January Deaths.—During January 1,331 deaths occurred, 13 more than in December and 81 less than in January, 1905. The rate was equivalent to an annual mortality of 16.2 per 1,000. Pneumonia caused 200 deaths, diseases of the nervous system, 171, heart disease, 136, consumption, 105, accidents and violence, 179, and influenza, 41.

Infectious Diseases.—During January 562 cases of measles were reported in 62 towns, 157 cases of scarlet fever in 39 towns, 7 cases of cerebrospinal meningitis in 3 towns, 159 cases of diphtheria in 37 towns, 80 cases of whooping cough in 10 towns, 46 cases of typhoid fever in 21 towns, and 37 cases of consumption in 20 towns.

Election of Officers.—The New Haven County Medical Society has elected the following officers: President Dr Leonard W Bacon, Jr, vice presidents, Dr Henry W Ring and Dr Edward M McCabe, secretary, Dr Willis E Hartshorn, treasurer, Dr Robert E Peck, and executive committee, Drs Jay W Seaver and Stephen J Maher.

Personal.—Dr Archibald McNeil, who has been bacteriologist of the New Haven board of health for several years has resigned.—Dr George S Ford has been appointed fire department surgeon of Bridgeport vice Dr Elmer F Blank.—Dr C Lincoln Banks has been chosen physician of the Bridgeport police department vice Dr J Murray Johnson.

Illegal Practitioner Fined.—"Prof" G Herman Lawson Hartford who is at present under charges for alleged violation of the medical practice act, was fined \$60.70 for drunkenness, breach of the peace and assault. He is held in \$200 bonds on the charge of practicing medicine without a license.—In the

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A Power for four years, Dr James J Minot for four years, Miss Isabel Hyams for three years, John E. Potts for two years, Dr John F O'Brien for two years, and Herbert F Price for one year. A special law is before the legislature to permit this board to hire 100 beds in private institutions at \$5 per week until the new hospital can be constructed and fitted for use.

What Constitutes Practice of Medicine—Vigorous efforts are being made to secure a more definite statement in the laws of Massachusetts as to what constitutes "practice of medicine" and hence render its practitioners amenable to the State Board of Registration. Opposition to any such regulation comes from followers of Eddyism, mind cure, hypnotism, massage and the like. District Attorney Moran failed to secure the passage of his bill looking to the regulation of abortionists, recently quoted in *THE JOURNAL*. The osteopaths are earnestly seeking the establishment of a separate board of registration for their school.

NEBRASKA.

Physician's Office Burned.—The office of Dr Charles O Petty Beaver Crossing, was destroyed by fire January 24 with a loss of \$2 500.

Stricken with Apoplexy—Dr Benjamin F Crummer, Omaha, former president of the Nebraska State Medical Society, was attacked with cerebral hemorrhage, March 12.

Methodist Hospital Assured—The entire \$35,000 necessary to obtain the \$30,000 donation of Dr August F Jonas, Omaha, to the Methodist Hospital of that city, was completed March 1.

Awarded Damages.—Dr Charles Rosewater, Omaha, on February 4, was awarded \$11,000 damages against the Illinois Central Railroad for injuries received by being run down by a train on that road Jan 2, 1904. He brought suit for \$20,000, claiming permanent injuries.

Personal.—Dr H. L. Wells, West Point, has been appointed physician of Cuming County.—Dr Silas G Allen, Clarkson, has been appointed coroner of Colfax County, vice Dr Edward C Jungbluth Schuyler, deceased.—Dr William R. Cornelius, Columbus, has been, for the third time, appointed physician of Platte County.

County Medical Society Election.—At the annual meeting of the Omaha Douglas County Medical Society, Dr Warren H. Stabaugh, South Omaha, was elected president, Dr Richard C Moore, Omaha, vice president, Dr Joseph M. Aikin, Omaha, secretary, Dr Millard Langfield, Omaha, treasurer, and Dr Andrew B Somers, Omaha, member of the board of censors.

Faculty Changes.—The University of Nebraska, Medical Department, announces the following changes in the faculty. Dr D Francis Lee has been made professor of materia medica, Dr Mattie Laughlin Arthur, instructor in obstetrics, Dr Charles W Pollard, adjunct professor of obstetrics, and Ernest Clifford Page, lecturer on medical jurisprudence. Drs Fwing Brown and George B Dandy have resigned.

Mortality Statistics.—The State Board of Health reports 5 470 deaths during 1905 of which the largest number, 724, occurred in October and the smallest number, 293, in August. Heart failure is charged with 532 deaths, tuberculosis with 362, cancer with 245, apoplexy with 200, nephritis with 165, paresis with 147, and typhoid fever with 109. During the year there were 76 suicides, 43 individuals were accidentally burned to death the same number killed by firearms, and 36 persons were drowned.

NEW YORK.

Throat Disease Prevalent—More than a thousand persons in Yonkers are suffering from a contagious disease of the throat having symptoms somewhat similar to those of diphtheria. It is the opinion of the health officer that the affection is due to atmospheric conditions.

Want Local Health Commissioner—Bills were introduced into the senate and assembly creating the office of health commissioner for the Boroughs of Brooklyn and Queens, thus taking from Commissioner Durlington control of the health department in those two boroughs. The bill has the indorsement of Dr William F Campbell president of the Kings County Medical Society. Dr J W Fleming and Dr J C Hicks.

Ulster Water Supply Near—A bill intended to compensate the people of Ulster County against any possible loss by reason of New York City going there for water and permitting of indirect damages to real estate owners and also compelling New York City to rebuild more than half the system of Kingston which will have to be torn up in laying New York pipes, will make it possible for both the city and the county to reach a final agreement.

Bills to Help Sick Poor—The Assembly cities committee held hearings on March 6 on bills affecting the plans of the city for the relief of the sick poor. One was the Wedemeyer bill, which prohibits New York City from establishing a consumptive sanatorium on Staten Island. Robert W Hebbard, commissioner of charities, spoke in behalf of the city, showing how necessary it was that the consumptives of the city should be adequately taken care of, and that local prejudice should not be allowed to interfere with this work. The hearing on the Tompkins bill authorizing New York City to establish a recreation colony for convalescents and sick persons on Long Beach developed the fact that the town of Hempstead was anxious to hold Long Beach for speculative purposes. Drs J W Barnan of Bellevue and Allied Hospitals, S S Goldwater, superintendent of Mount Sinai Hospital, and others urge the humanitarian side of the question, and consequently the bill is to be amended to have the colony known as a recreation park under the jurisdiction of the park department.

New York City.

Harvey Society Lecture—The thirteenth and last lecture for the year in the Harvey Society course will be delivered by Prof W H Howell of Johns Hopkins University at the New York Academy of Medicine, March 17, at 8 30 p m. Subject, "The Cause of the Heart Beat."

Personal.—Dr Henry Russell was quite severely burned about the face and hands while trying to extinguish a fire in his office. He was taken to Roosevelt Hospital.—Dr M E Lewis, interne of the first surgical division at Bellevue Hospital, is confined to his room and it is feared that he has contracted diphtheria.

Adulterated Milk.—The permit of one large dairy company was revoked by the board of health after the report of the chief sanitary inspector had been submitted. The milk was not tampered with in the country or at the stations, but at a large milk depot in this city, where chronic adulteration on a large scale was cleverly carried on.

After Doctors Who Do Not Report.—The health department is after Brooklyn physicians who do not report contagious diseases which they attend. The increase in the number of cases of measles in Brooklyn has shown that physicians are not diligent in reporting cases. It is stated that hereafter negligent physicians will have to make their explanations in court.

Special Lectures—Dr L. Duncan Bulkley will give four special lectures at the New York Skin and Cancer Hospital, Second Avenue and Nineteenth Street, March 21 and 28, and April 4 and 11, in the Out patients' hall of the hospital at 4 15 on "The Principles and Application of Local Treatment of Diseases of the Skin." These lectures are free to members of the medical profession.

Can Not Stop Steam Whistles—In regard to the complaints of residents of Riverside Drive against the blowing of whistles in the harbor and the request that additions be made to the sanitary code to allow prosecution of the offenders, the health board has decided that the present code covers the question as fully as the city can regulate it and that any further action will have to be taken by the federal government.

Contagious Diseases—There were reported to the sanitary bureau for the week ended March 3, 1,003 cases of measles, with 45 deaths, 475 cases of tuberculosis, with 225 deaths, 405 cases of diphtheria, with 61 deaths, 222 cases of scarlet fever, with 5 deaths, 37 cases of typhoid fever, with 7 deaths, 20 cases of cerebrospinal meningitis with 21 deaths, and 180 cases of varicella, making in all 3,251 cases, with 364 deaths.

New Metropolitan Hospital.—At the annual meeting of the Metropolitan Hospital and Dispensary board, March 8, it was decided to purchase a site for a new building at once. The following gave \$5 each: L. Leipsiger, R. F. Rudell, L. Gottlieb, C. Helborn, M. Featherston, S. Weiner, L. D'Angello, G. A. Semel and H. G. Ramsperger and S. Uhlfelder, and in all \$5 000 was subscribed. The building committee was authorized to sell the present hospital site and the woman's auxiliary was requested to obtain the necessary furnishings for the new hospital.

Raid on Spitters—It is said that for the past three months from eight to ten arrests have been made each day for spitting, but little attention was paid to the matter, so the health department decided to call the attention of the public to this class of offenders by arresting men in the theater district. On the evening of March 8 nine arrests were made in the lobbies of theaters and the offenders held in \$500 bail for appearance in court. Only a few were fined as it was held that the theater lobbies were public places within the meaning of the sanitary code and that cuspidors should have been provided.

Nurses and Hospitals Criticized—At the meeting of the alumni of Bellevue Hospital Medical College at the Yale Club, Dr. W. Gilman Thompson was especially severe on the nurses, stating that the profession was in the hands of a "nurses' trust." Other speakers on this occasion pointed out the desirability of establishing hospitals at convenient points throughout the city which could be reached readily in case of necessity. Dr. Russell Bellamy made a plea for cheaper hospital construction. Hospitals should be built like barracks as a distinguished English physician had said and should be burned down once in every five years and then built over again.

Warned Against Malpractice—The postal authorities some time ago decided to start a campaign against persons guilty of malpractice in this city who advertise and use the mails for this purpose. Postoffice Inspector Snow of Boston who recently conducted a similar campaign with success was ordered to come to New York to take charge. He found in several papers advertisements of a character that left no doubt as to the advertiser's intent. The County Medical Society's detectives furnished in some instances practically legal proof. More than fifty of the best known of the advertisers were asked to call at the Federal Building and see Inspector Snow. The majority of the callers were women, all were warned and a few will leave the city. Some arrests may be made.

Measles and Diphtheria—Dr. Darlington, the health commissioner of this city, has appealed to the people of New York, asking that every precaution be taken to prevent the spread of measles and diphtheria, since both diseases have been increasing rapidly in all sections of the city. In January and February there were 616 more cases and 77 more deaths from diphtheria than during the same period of last year. The record of March, 1904, when 7,000 cases were reported, will be broken unless the epidemic is curbed. In February, 6,310 cases of measles were reported and during the first week in March, 1,500 more. Dr. Darlington has advised a generous use of anti-toxin even before the examining physician has reached a decision. The report of the health department covering a period of thirteen weeks, shows that Ellis Island is one of the most fertile spots for the breeding of disease in the city. There were 168 cases of measles taken from the island in the period above mentioned.

OHIO

Physician Fined—Dr. Alexander Gritz, Toledo, was fined \$50 and costs, February 21, for practicing without a license.

Byron Stanton's Semi-Centennial—Twenty professional friends and associates of Dr. Byron Stanton, Cincinnati, celebrated the fiftieth anniversary of his entrance into the medical profession, February 23, with a banquet, at which a loving cup was presented to Dr. Stanton by Dr. N. Pendleton Dandridge on behalf of those present.

Want Hospital Instead of Library—Twenty-one hundred of the citizens of Mansfield have signed petitions requesting that the Carnegie Library building now in course of erection, be made into a city hospital and that the \$10,000 already advanced by Mr. Carnegie be returned to him unless he is willing to have the building used as a hospital.

Fires—Two fires have recently occurred in the Branch Hospital, Cincinnati. A fire from a defective grate in the apartments of the superintendent of Longview State Hospital in Cincinnati caused a loss of \$1,000. The office of Dr. Minor M. Jacobs, Hamilton, was destroyed by fire February 14, with a loss of about \$1,400, partially covered by insurance.

Academy Meeting—At the regular meeting of the Cincinnati Academy of Medicine, March 5, the following officers were elected for the ensuing year: President, Dr. John E. Grewe, vice presidents, Drs. Henry W. Bettman and Ellen McCarthy, secretary, Dr. Stephen E. Cone, treasurer, Dr. Alexander G. Drury, trustees, Drs. N. Pendleton Dandridge, J. F. Hesse and Asa B. Isham, and censors, Drs. Edwin W. Mitchell, E. Gustav Zinke and David I. Wolfstein.

Appointments by the Board of Public Service, Cincinnati—Physician to the workhouse, Dr. J. A. Flanagan, vice Dr. Otto P. Geier, salary \$100 per month, physician to House of Refuge, Dr. Moses Salzer, vice Dr. F. A. Kautz, salary \$37.50 per month, physician to City Infirmary, Dr. J. M. Adams, \$112.50 per month, medical superintendent of the Branch Hospital for Consumptives, at \$100 per month, and contagious disease expert to the health department at \$75 per month, succeeding Dr. B. F. Lyle, Dr. Albert Faller.

Tuberculosis Hospital Has Waiting List—The Cincinnati Branch Hospital has become so popular among the tuberculous poor of the city that accommodations can not be supplied for all applicants and quite a large waiting list has arisen. For

the most part, those waiting are being treated at their homes, but, unfortunately, not a few have to be kept in the main building of the hospital. The failure of the board of public service to provide accommodations for the tuberculous poor, if necessary, by means of tents, is defeating the purpose for which the branch was built, the separation of the consumptives from those afflicted with other diseases, in this way preventing the spread of the disease.

Condemns Drink Cure—The Montgomery County Medical Society, at its meeting March 2, expressed its disapproval of the exploitation by the lay press of the Oppenheimer method, which is claimed to cure drunkenness. The censors in their report noted that the exploitation of this so-called cure provided for a committee of prominent citizens which did not contain the name of a single member of the medical profession, but was made up of eight clergymen and nine other gentlemen, who presumably were not qualified to pass on the correctness or incorrectness of the claims made by the proprietors of this alleged cure. The censors advise the society to place the stamp of disapproval on this attempt of mercantile medicine to obtain a standing in the community under the cloak of charity.

Personal—Dr. Monzo B. Walker, Canton, has been elected president of the Union Medical Association of the sixth councilor district. Dr. Wm. A. Dickey, Toledo, was struck by a car, February 25, and rendered unconscious. Dr. Milton V. Cunningham has been appointed city physician of Youngstown, vice John J. Thomas. Dr. Charles S. Hamilton has succeeded Dr. Starling Loving as dean of Starling Medical College, Columbus. Dr. J. Hollis Ward, Vinton, is seriously ill with pneumonia at the home of his parents in Columbus. Dr. Martin Stamm, Fremont, has been elected president of the Sandusky Medical Society, vice Dr. Robert H. Rice, Fremont, deceased. Dr. Edward Reinert, Columbus, was operated on for appendicitis, February 28. Dr. Charles A. Cooperrider, Columbus, was made seriously ill by an overdose of a drug taken to relieve pain, March 4. Dr. Charles M. Showman, North Baltimore, is seriously ill with appendicitis.

Celebrate Twenty-fifth Anniversary—The following ten Cincinnati physicians celebrated the twenty-fifth anniversary of their graduation in Medicine, February 28: Dr. F. W. Langdon, neurologist, Miami Medical College, Cincinnati Hospital and Cincinnati Sanitarium, Dr. Frank W. Harmon, superintendent Longview Insane Asylum, Dr. Allen B. Thrasher, laryngologist, trustee of the Cincinnati Hospital, Dr. John L. Davis, medical director Union Central Life Insurance Company, Dr. Edward S. McKee, gynecologic department of the Medical College of Ohio for twenty-three years, Dr. George A. Packler, of the staff of Cincinnati Hospital, Dr. Benjamin F. Clark, surgeon of the Big Four Railway and Cincinnati fire department, Dr. David DeBeck, ophthalmologist, Medical College of Ohio and Good Samaritan and St. Mary's hospitals, Dr. John H. Blau, practitioner of Covington, Ky., Dr. N. Irwin Scott, practitioner of Norwood and Dr. Adolph Grimm, practitioner of Cincinnati and for many years in the laryngological department of the Medical College of Ohio.

PENNSYLVANIA

Philadelphia

Announcement—The annual meeting of the American Society of Tropical Medicine will be held in Philadelphia, March 21.

Bequest—By the terms of the will of the late Rev. Benjamin H. Sanderlin, the Methodist Hospital will receive \$5,000 for the endowment of a free bed to be known as "the Memorial Methodist Episcopal Church bed, donated by the Rev. Benjamin H. Sanderlin and wife."

Non-Suit Accepted—After a partial trial in Common Pleas Court No. 1, March 9, the action brought by Emil Krueger against Dr. H. Augustus Wilson to recover \$10,000 damages for injuries in an automobile accident, was ended by counsel for the plaintiff suffering a voluntary non-suit.

Hospital Reports—During February the Methodist Hospital admitted 92 patients and treated 454 new patients in its various outdoor departments. The Polyclinic Hospital admitted 103 patients to the wards and treated 1,598 new patients in the dispensaries. In all 7,791 visits were made to the out-patient departments.

Personal—Dr. and Mrs. J. Norman Risley are in England. Dr. and Mrs. Boardman Reed have returned from Europe and are now in California. Dr. William G. Niles, resident physician in the Presbyterian Hospital, is seriously ill. Dr. James Anders is confined to his house with influenza. Dr. Hiram Langrehr was thrown from his bicycle March 6, and severely injured.

Discussion on Quackery.—On March 19 the Philadelphia Medical Jurisprudence Society will discuss, "Quackery What Are We Going to Do About It?" Hon. Champe S. Andrews, counsel of the New York County Medical Society, will deliver the opening address, and Philadelphia physicians hope that this meeting may mark the start of a movement against the horde of quacks now preying on the Philadelphia public that will equal the success of that against those of other culprits, the abortionists.

Work of Visiting Nurses.—At the annual meeting of the Visiting Nurses' Society it was reported that the number of new cases visited aggregated 2,311, and the number of old cases visited was 121, making the total number of cases visited 2,432. The number of visits paid was 38,282. The school nurses' report is as follows: The number of schools assigned, 6, number of treatments given to old cases, 6,692, number of new cases, 1,708, number of children attended at home, 476, number of visits to homes, 843. Mrs. Henry C. Lea was elected president.

Lectures and Addresses.—Dr. John B. Deaver addressed the Stillé Medical Society of the University, March 2, on "The Relation of the Physician to Modern Surgery."—Dr. Edward C. Spitzka, New York City, delivered a free public lecture on "The Brain" at the rooms of the American Philosophical Society, March 16.—Dr. M. P. Ravenel of the state veterinary board addressed the Pennsylvania State Veterinary Medical Association on "Hydrophobia" at the annual meeting in this city, March 6.—Dr. Ward Brinton, secretary of the Pennsylvania Society for the Prevention of Tuberculosis, delivered a lecture on "Consumption," March 8, at St. Ambrose's Protestant Episcopal Mission.

Health Report.—The total number of deaths reported for last week numbered 633. This is a decrease of 37 from those reported the week before, and an increase of 34 over the number reported in the corresponding period of last year. The principal causes of death were: Typhoid fever, 35, measles, 12, diphtheria, 10, consumption, 76, cancer, 13, apoplexy, 15, heart disease, 45, acute respiratory disease, 122, gastritis, 8, enteritis, 36, Bright's disease, 48, premature birth, 19, accidents, 29, marasmus, 2. There were 357 cases of contagious disease reported, with 52 deaths, as compared with 469 cases and 56 deaths in the previous week. There was a marked decrease in the cases of typhoid fever reported during the week, the number being 231 as compared with 352 reported in the previous week. The situation concerning typhoid in relation to its distribution is the same as it has been during the past six months, the bulk of the new cases being reported from wards comprising the northeastern section of the city, which receives the water supply by direct pumpage from the Delaware River. Measles is still prevalent, the number of cases this week reaching 630, or 6 more than those reported last week. Notwithstanding the large number of cases the death rate is comparatively small, 12 deaths being reported from this disease during the week.

TENNESSEE

Attempt at Suicide.—Dr. Edward P. Gould, Chattanooga, formerly of Royal Center, while temporarily deranged from overwork, attempted suicide January 9 by cutting his throat. Fortunately aid came in time and he has recovered.

Found Guilty of Murder.—Dr. Y. Safford Trover, Memphis, charged with murder in the second degree on account of criminal malpractice, was found guilty February 10 and sentenced to imprisonment for ten years in the penitentiary.

Ground Broken for New College.—On March 1 the ground for the new Memphis College of Physicians and Surgeons was formally broken in the presence of the faculty and students by Dr. Maximilian Colman. The building will cost about \$60,000 and will be ready by September 1.

New Hospitals.—Lincoln Memorial Hospital, Knoxville, erected by the Tennessee Medical College at a cost of \$40,000, was opened February 12. In addition to four large wards it has two private wards, an obstetrical ward, an operating pavilion, nurses' ward, etc.—Dr. William I. Matthews has opened a private hospital in Johnson City.

Society Meetings.—The Rutherford County Medical Society held its annual meeting in Murfreesboro Dec. 6, 1905. The following officers were elected: Dr. James B. Murfree, Sr., Murfreesboro, president; Dr. James I. Rucker, Averall, vice-president; Dr. Rufus Pitts, Murfreesboro, secretary; and treasurer, Dr. Fnoch H. Jones, Murfreesboro; censor, Dr. V. K. Barthman, Murfreesboro; delegate to the state association, and Dr. Harry C. Rees, Murfreesboro, alternate.—The Union City Academy of Medicine was organized at that place Janu-

ary 26. Dr. D. M. Pierce was elected president, Dr. J. M. Rippy, vice president, and Dr. Marion A. Blanton, secretary.—Greene County Medical Society has elected the following officers for the ensuing year: President, Dr. H. H. Ruble, Greeneville, secretary, Dr. S. Walter Woodyard, Greeneville. The society is in prosperous condition and includes in its membership the majority of the eligible physicians in the county.

Personal.—Dr. Marcus Haase, Memphis, formerly secretary of the local health board, who resigned in order to pursue his studies in Johns Hopkins and in Berlin, was given \$1,200 by a number of his friends, January 14.—Dr. John C. Bell has been appointed chief sanitary inspector of the Memphis board of health, vice Dr. James L. Andrews, promoted to secretary of that board.—Dr. W. Frank Glenn has been elected president of the board of health of Nashville.—Dr. George P. Edwards, Nashville, has sufficiently recovered from his recent operation to be removed to his home.—Dr. and Mrs. E. R. Hochstetter, Ridgedale, are spending the winter in California.—Dr. E. E. Shivers has been made surgeon for the Louisville & Nashville Railway and assistant surgeon for the La Follette Coal, Iron & Railway Company at Somerville.—Dr. John R. Rathmell has been made dean of the Medical Department of Grant University, Chattanooga, vice the late Dr. Edward A. Cobleigh, and Dr. William G. Bogart has succeeded Dr. Rathmell as secretary of the faculty.—Dr. Rufus E. Fort, Nashville, has been appointed a member of the State Board of Health, vice Dr. William J. McMurray, deceased.—Dr. Thomas H. Marable, Clarksville, has been appointed local surgeon for the Illinois Central Railway Company.—Dr. William B. Rogers has been appointed president of the Memphis board of health.

TEXAS

Medical Books for Library.—Two hundred volumes of medical books have been bequeathed to the Carnegie Library, Houston, by the late Dr. William H. Harrison, Brunner.

Malpractitioner Pardoned.—Dr. Hannah Reum, El Paso, who is serving a penitentiary sentence of two years on the charge of criminal malpractice, has been pardoned because of the critical condition of her health.

Railway Hospital at Sherman.—The management of the Frisco System has issued an order designating St. Vincent's Sanitarium, Sherman, as the general hospital for the south western division of the system.

Fires.—The residence of Dr. Aaron L. Jones, Prairie Dell, was destroyed by fire January 9. Very little was saved and no insurance was carried.—The building at Melissa, owned by Dr. J. E. Hunter and occupied by Dr. A. V. Rutledge, was destroyed by fire, January 20.

Smallpox.—Several cases of smallpox are reported in and around Madison.—A number of cases have been reported in San Angelo.—The public school at Frost has been closed on account of smallpox.—Six cases of smallpox are reported in the southeastern part of Comanche County.—On February 14 several new cases of smallpox were reported at Boyd.

Gift to Dr. Tabor.—Before State Health Officer Tabor left for Europe eighteen of the leading citizens of Galveston forwarded him a check for \$1,000 and steamship transportation for himself and wife in token of their appreciation of the efficient work of Dr. Tabor in keeping Galveston and its trade territory free from yellow fever.

State Society Meeting.—The annual meeting of the Texas State Medical Association will be held in Fort Worth, April 24, 25 and 26. Dr. William R. Thompson is chairman of the committee of arrangements, Dr. Bacon Sanders of the subcommittee on finance, Dr. Frank D. Thompson of the subcommittee on transportation, Dr. John R. Fraser of the subcommittee on reception, and Dr. Frank D. Boyd of the committee on entertainment and place of meeting.

Personal.—Dr. J. H. Florence, quarantine officer at Brownsville, is acting as state health officer during Dr. Tabor's stay in Europe.—Dr. John W. Burns, Cuero, is visiting in New York.—Dr. William J. Matthews, Austin, is seriously ill from overwork.—Dr. Thomas W. Wiley, McKinney, has been appointed chief surgeon of the Texas New Mexico & Pacific Railway.—Dr. Charles W. Trueheart, city health officer of Galveston, is reported to be critically ill.—Dr. William Myers, Seagun, was thrown from his buggy in a runaway accident and his hip and clavicle broken.

Medical Society Meetings.—The Tri-State Medical Society of Arkansas, Texas and Louisiana held its second annual meeting in Texarkana, Ark., December 6. The following officers were elected: Dr. Oscar Dowling, Shreveport, La., president.

Dr. Charles M. Rosser, Dallas, Texas; M. G. Thompson, Hot Springs, Ark.; and Luther Longino Minden, La., vice president; and Dr. Robert H. I. Mann, Texarkana, Ark., secretary.

The South Texas District Medical Association held its annual meeting, December 17 and 18, at which the following officers were elected: Dr. D. Stuart Wier, Beaumont, president; Dr. Perry G. Swannick, Center, censor; Dr. Jordan, Liberty, vice president; and Dr. Albert A. Nelson, Nacogdoches, secretary and treasurer. Houston was selected as the next place of meeting.

The Seventh Councilor District Medical Society held its annual meeting in Austin, December 21, at which the following officers were elected: Dr. Joseph A. Holloway, Round Rock, president; Dr. Joseph Gilbert, Austin, secretary; and Dr. Andrew J. Sibbey, Groesbeere, Ill. Matt Thomas, Georgetown; James C. Anderson, Granger; Homer B. Hill, Austin; and S. I. Hudson, Austin, censors.

At a meeting held February 16, the North Medical Association of Fort Worth was organized with the following officers: Dr. Peter R. Robinson, president; Dr. W. I. Hughes, treasurer; Dr. J. M. Mosely, reporter; and Dr. Franklin W. Adams, secretary.

GENERAL

A Moral Victory for the Ladies' Home Journal—A jury of the Supreme Court at Buffalo, N. Y., recently awarded the World's Dispensary Medical Association proprietors of a patent medicine known as Dr. Pierce's Golden Medical Discovery \$16,000 damages in a suit for libel against the Curtis Printing Company, publishers of the *Ladies' Home Journal*. The libel consisted in a statement that this particular medicine contained opium, digitalis and alcohol. The suit was originally brought for \$200,000 damages and the award was so small that the plaintiff immediately made a motion for a verdict on the ground of inadequate damages.

Health Report of the Philippines for October—The health report of the Board of Health for the Philippine Islands for October states that during the month 812 births were recorded of which 452 were males and 360 females. There were 904 deaths or an average of 29 deaths per diem. This is a lower death rate than for the two preceding months. During the month there were 31 cases of cholera, with 29 deaths. The infant mortality, especially among children included in the groups of "under 30 days" and "between 30 days and one year" reached 168. This was 62 more than during the preceding month.

FOREIGN

Cholera Declining in Russia—It is reported, by way of Berlin, that the Russian cholera commission has declared the Vistula district, the districts of Volhynia and Kurland, and the city of Iomza free from cholera.

Research on Etiology of Syphilis—A Berlin lawyer named Salomonsohn recently founded an endowment to aid scientific research. The first grant (\$400) from the endowment has been given to J. Siegel, the discoverer of the *Cytorrhycles luis*, to enable him to continue his studies on the etiology of syphilis.

Wealthy Physician Labors Among Poor—Duke Carl Theodore of Bavaria is a well known physician, having long made ophthalmology his specialty. He recently performed his five thousandth cataract operation, assisted by Dr. Zenker, and by his wife, who was the Princess Maria of Portugal. She has always taken an interest in his work and frequently assists him. It is said that he never accepts a fee from any patient, devoting his services to the poor. He lives in Munich and has made many endowments for hospitals and other charitable purposes.

Smallpox in Mexico—Consul Lespinasse reports from Tuxtepec, February 7, that an epidemic of smallpox prevails in that vicinity, but that other settlements and municipalities included in the county are exempt from the disease. Since November 20, the date on which the first case of the epidemic occurred, 80 cases have been recorded. Of these patients 26 have recovered, 12 have died, and 22, most of whom will recover, are still under treatment. The measures adopted to check the course of the epidemic consist of isolation of the sick, necessary aid to the sufferers, and prompt disinfection of the houses in which smallpox patients have been treated.

Board and Lodgings at Lisbon International Medical Congress—The executive committee sends word to THE JOURNAL that a large number of rooms with one or more beds, have been secured for the accommodation of the members of the congress. The rates will be from 6 to 10 francs per bed (about \$1.50 to \$2). Rooms with board can also be secured for 15 francs, or \$3 a day for each person. A restaurant will be run in connection with the congress, and meals can also

be obtained at the restaurants and hotels of the city. The rooms will be assigned in turn as the demands are received. Mr. Manoel José da Silva, Palácio Foz, Praça dos Restauradores, Lisbon, has charge of this service. The French, Spanish, Portuguese and Italian railroads allow a reduction of 50 per cent, and a change of route going and coming, on condition that the trip is by rail each way. See page 597 for further particulars, see also Correspondence Department in this issue.

LONDON LETTER

The Amalgamation of the London Medical Societies

Considerable progress has been made in the scheme for the amalgamation of the numerous London medical societies which has been previously described in THE JOURNAL. At a meeting of the representatives in December an organizing committee was appointed to draw up a detailed scheme. In order to ascertain the amount of financial support likely to be received a circular was issued to over 5,000 doctors, asking for an immediate reply to certain questions as to the probability of their joining the new society as fellows or members. A fellow will pay a subscription of \$15 a year, which will give him the right to attend discussions in all sections, to use the general library, and to receive the proceedings and transactions of the society. A member of only a section will pay \$5 a year and will have the right to take part in the proceedings of the section, to receive its publications, and to use the general reading room. Such a member will be entitled to join other sections on payment of \$2.50 for each additional section, and to obtain the use of the general library for a further subscription of \$5. Every member of a society joining the amalgamation who desires to become a member of the corresponding section or a fellow of the new society will be able to do so without election. It is proposed that those elected subsequently shall pay an entrance fee, and that only the members of a section shall have the power to vote on matters of the section.

The Rebuilding of the London Hospital

Within the last few weeks the reconstruction of the largest general hospital in England has been completed at a cost of over \$2,150,000. The hospital has been practically rebuilt and now presents a remarkable example of perfection in so far as a well built structure, part of which dates from 1752, can be compared with new buildings erected regardless of the value of land. Of the sum expended at least \$1,650,000 has been subscribed by the public for the purpose. The remaining \$500,000 has been taken from the invested funds of the institution. The state of the hospital eight years ago amounted to a scandal. There were 780 beds and but one operating theater. The pressure on this single theater was such that the patients had to wait their turn in a fashion which amounted to absolute cruelty. Now there are eight operating theaters, five of which are in daily use, the other three being required not less than four days a week. There are now 937 beds in the hospital. Formerly the outpatient department was totally inadequate to deal with the 161,000 individual outpatients who there sought relief—a number which has now increased to 206,000. There were no proper seclusion and isolation wards. The ophthalmic cases were accommodated in a damp basement below the ground level. The arrangements for children were such that the constant outbreaks of infectious disease paralyzed the whole work.

The London School of Clinical Medicine

The organization of the old Serpents' Hospital at Greenwich as a postgraduate school, which promises to be one of the most important in this country, has recently been described in THE JOURNAL. At a meeting of one of the branches of the British Medical Association, held at the hospital, special attention was directed to the advantages offered by it as a postgraduate school. Sir Dyce Duckworth, who presided said that the hospital had done excellent work in the past but during the last few months the staff had been materially increased and included members well known to the medical world at large as eminent in their several departments. He said that no institution so well equipped for the purpose had been organized in London, and was a great advance in the direction of supplying a want that had long been felt. He said that medical men from various parts of the world go to England and, not finding what existed in Germany and France, turned their backs on London and betook themselves to other countries. The hospital provided accommodation chiefly for sailors and in connection with the School of Tropical Medicine, of which it formed part, it provided for observation splendid examples of tropical diseases—dysentery and beriberi. Thus an excellent field is provided for officers of the navy and army and for those who are fitting themselves for colonial practice.

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vision of such bureau, for the purpose of determining from such examinations whether such articles are adulterated or misbranded within the meaning of this act, and if it shall appear from any such examination that any of such specimens is adulterated or misbranded within the meaning of this act, the Secretary of Agriculture shall cause notice thereof to be given to the party from whom such sample was obtained. Any party so notified shall be given an opportunity to be heard, under such rules and regulations as may be prescribed as aforesaid, and if it appears that any of the provisions of this act have been violated by such party, then the Secretary of Agriculture shall at once certify the facts to the proper United States district attorney, with a copy of the results of the analysis or the examination of such article, duly authenticated by the analyst or officer making such examination, under the oath of such officer. After judgment of the court notice shall be given by publication in such manner as may be prescribed by the rules and regulations aforesaid."

PROSECUTIONS

"Sec 4 That it shall be the duty of the Secretary of Agriculture to whom the

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"SEC 4 That it shall be the duty of each district attorney to whom the Secretary of Agriculture shall report any violation of this act, or to whom any health or food or drug officer or agent of any state, territory, or the District of Columbia, shall present satisfactory evidence of any such violation, to cause appropriate proceedings to be commenced and prosecuted in the proper courts of the United States, without delay, for the enforcement of the penalties as in such case herein provided"

DEFINITION OF "DRUG" AND "FOOD"

"SEC 5 That the term 'drug' shall include all medicines, poisons, acids, alkalis, chemicals, and other substances which are used for medicinal purposes, and the term 'food' shall include all articles of food, whether solid or liquid, which are used for nourishment."

DEFINITION OF "DRUG" AND "FOOD"

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"SEC 5 That the term 'drug,' as used in this act, shall include all medicines and preparations recognized in the United States Pharmacopeia or National Formulary for internal or external use, and any substance or mixture of substances intended to be used for the cure, mitigation, or prevention of disease of either man or other animals. The term 'food,' as used herein, shall include all articles used for food, drink, confectionery, or condiment by man or other animals, whether simple, mixed or compound."

DEFINITION OF "ADULTERATED"

"SEC 6 That for the purpose of this act, any article shall be deemed to be adulterated—

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"In case of drugs

"First—If, when a drug is sold

ized in the United States, it contains any article shall

"In case of drugs
"First—If, when a drug is sold under the standard recognized in the United States Pharmacopeia or National Formulary, it differs from the standard of strength, quality, or purity as determined by the test laid down in the United States Pharmacopeia or National Formulary official at the time of the investigation
"Second—If its strength or quality under a
"In the case of counterfeit
"If it contains

"In the case of confectionery
other mineral substance or poisonous color or flavor, or other
ingredient deleterious or detrimental to health
"First—If any substance has been found to contain
so as to reduce or lower its strength or quality under which it is sold

"*First*—If any substance has been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength

"*Fourth*—If it be mixed, colored, powdered or in any valuable constituent of the article has been wholly or in part abstracted.

"Fifth—If it contain any added poisonous or deleterious ingredient which may injure health. Provided, that the article has been prepared in a manner whereby damage or inferiority is con-

Provided, that when in the preparation of food products for shipment they are preserved by an external application applied in such manner that the preservative is necessarily removed mechanically, or by maceration in water or otherwise, the provisions of this act shall be construed as applying only when said products are ready for consumption.

"Sixth—If it consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter."

DEFINITION OF "MISBRANDINGS"

"SEC 7 That the term 'misbranded' shall apply to all drugs of the following classes:

DEFINITION OF "MISBRANDING"

DEFINITION OF "MISBRANDING"

"SEC 7 That the term 'misbranded,' as used herein, shall apply to all drugs or articles of food, or articles which enter into the composition of food, the package or label of which

TO ESTABLISH METHODS OF PROCEDURE

“Sec 2 That the Secretary of the Treasury, the Secretary of Agriculture and the Secretary of Commerce and Labor shall make uniform rules and regulations for carrying out the provisions of this act including the collection and examination of specimens of foods and drugs manufactured or offered for sale in the District of Columbia or in any territory of the United States or which shall be offered for sale in unbroken packages in any state other than that in which they shall have been respectively manufactured or produced or which shall be received from any foreign country or intended for shipment to any foreign country or which may be submitted for examination by the chief health officer of any state or territory or the District of Columbia or at any domestic or foreign port through which such product is offered for interstate commerce or for export or import between the United States and any foreign port or country”

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ARTICLES OF EXAMINATIONS

shall bear any statement regarding the ingredients or substances contained in such article which statement shall be false or misleading in any particular, and to any food or drug product which is falsely branded as to the state, territory, or country in which it is manufactured or produced

'That for the purposes of this act an article shall also be deemed to be misbranded

In case of drugs

'That if it be an imitation of or offered for sale under the name of another article

'That if the contents of the original package shall have been removed in whole or in part and other contents shall have been placed in such package or if it fail to bear a statement on the label of the quantity or proportion of any alcohol therein or of any opium, cocaine or other poisonous substance which may be contained therein

In the case of food

'That if it be an imitation of or offered for sale under the distinctive name of another article

'That if it be labeled or branded so as to deceive or mislead the purchaser or purport to be a foreign product when it is not

'That if in package form, the quantity of the contents of the package be not plainly and correctly stated in terms of weight or measure on the outside of the package

'That if the package containing it or its label shall bear any statement, design or device regarding the ingredients or the substance contained therein, which statement, design or device shall be false or misleading in any particular. Provided that an article of food which does not contain any added poisonous or deleterious ingredients shall not be deemed to be adulterated or misbranded in the following cases

'First—In case of mixtures or compounds which may be now or from time to time hereafter known as articles of food under their own distinctive names and not an imitation of or offered for sale under the distinctive name of another article if the name be accompanied on the same label or brand with a statement of the place where said article has been manufactured or produced

'Second—In the case of articles labeled, branded, or tagged so as to plainly indicate that they are compounds, imitations, or blends. Provided, that the term blend as used herein shall be construed to mean a mixture of like substances, not excluding harmless coloring or flavoring ingredients. And provided further, that nothing in this act shall be construed as requiring or compelling proprietors or manufacturers of proprietary foods which contain no unwholesome added ingredient to disclose their trade formulas, except in so far as the provisions of this act may require to secure freedom from adulteration or misbranding"

PROTECTION OF THE RETAILER WHO HAS GUARANTEES

'SEC 8 That no dealer shall be convicted under the provisions of this act when he is able to prove a guaranty of conformity with the provisions of this act in form approved by the rules and regulations herein provided for, signed by the manufacturer or the party or parties from whom he purchased said articles. Provided that said guarantor resides within the United States. Said guaranty shall contain the full name and address of the guarantor making the sale to the dealer, and said guarantor shall be amenable to the prosecutions, fines, and other penalties which would otherwise attach in due course to the dealer under the provisions of this act"

COMMISSION OF EXPERTS

'SEC 9 That it shall be the duty of the Secretary of Agriculture to fix standards of food products when advisable for the guidance of the officials charged with the administration of food laws and for the information of the courts, and to determine the wholesomeness or unwholesomeness of preservatives and other substances which are or may be added to foods, and to aid him in reaching just decisions in such matters he is authorized to call on the committee on food standards of the Association of Official Agricultural Chemists and the committee of standards of the Association of State Dairy and Food Departments, and such other experts as he may deem necessary

"And on request made to the Secretary of Agriculture prior to reaching any decision as provided for in this section, by any manufacturer or other person interested, asking for the appointment of a board to determine the wholesomeness or unwholesomeness of any preservative or other substance which is or may be added to foods, and concerning the use of which the person making the request has an interest, it shall be the duty of the Secretary of Agriculture to appoint a board of distinguished experts, which board shall consist of five members, one of

whom shall be an expert toxicologist, one an expert physiologic chemist, one an expert bacteriologist, one an expert pathologist, and one an expert pharmacologist, which board shall meet at the city of Washington, District of Columbia, or elsewhere, at the call of the Secretary of Agriculture, and pass on such question after proper notice and hearing granted to the person making such request. The compensation of the members of such board shall be fixed by the Secretary of Agriculture"

HOW SAMPLES MAY BE PROCURED

'SEC 10 That every person who manufactures or produces for shipment and delivers for transportation within the District of Columbia or any territory, or who manufactures or produces for shipment or delivers for transportation from any state, territory, or the District of Columbia, to any other state, territory, or the District of Columbia or to any foreign country, any drug or article of food, and every person who exposes for sale or delivers to a purchaser in the District of Columbia or any territory any drug or article of food manufactured or produced within said District of Columbia or any territory, or who exposes for sale or delivers for shipment any drug or article of food received from a state, territory, or the District of Columbia other than the state, territory, or the District of Columbia in which he exposes for sale or delivers such drug or article of food, or from any foreign country, shall furnish within business hours and on tender and full payment of the selling price a sample of such drug or article of food to any person duly authorized by the rules and regulations herein provided for to receive the same, and who shall apply to such manufacturer, producer, or vendor, or person delivering to a purchaser, such drug or article of food, for such sample for such use, in sufficient quantity for the analysis of any such drug or article of food in his possession

'SEC 11 That any manufacturer, producer, or dealer who refuses to comply, on demand, with the requirements of section ten of this act shall be guilty of a misdemeanor, and on conviction shall be fined not exceeding \$100, or imprisoned not exceeding 100 days, or both. And any person found guilty of manufacturing or offering for sale, or selling, an adulterated, or misbranded article of food or drug in violation of the provisions of this act may, in the discretion of the court, be adjudged to pay, in addition to the penalties hereinbefore provided for, all the necessary costs and expenses incurred in inspecting and analyzing such adulterated articles which said person may have been found guilty of manufacturing, selling, or offering for sale"

LIMITED TO INTERSTATE COMMERCE

'SEC 12 That this act shall not be construed to interfere with commerce wholly internal in any state, nor with the exercise of their police powers by the several states, but foods and drugs fully complying with all the provisions of this act shall not be interfered with by the authorities of the several states when transported from one state to another so long as they remain in original unbroken packages, except as may be otherwise defined by law or provided by statutes of the United States"

SEIZURE OF GOODS

'SEC 13 That any article of food or drug that is adulterated or misbranded within the meaning of this act, and is transported or being transported from one state to another for sale, or if it be sold or offered for sale in the District of Columbia or any territory of the United States, or if it be imported from a foreign country for sale, or if intended for export to a foreign country, shall be liable to be proceeded against in any district court of the United States, within the district where the same is found, and seized by a process of libel for condemnation. And if such article is condemned as being adulterated or misbranded, within the meaning of this act, the same shall be disposed of as the said court may direct, and the proceeds thereof, if sold, less the legal costs and charges, shall be paid into the treasury of the United States, but such goods shall not be sold in any state contrary to the laws of that state. The proceedings of such libel cases shall conform as near as may be to the proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in such case, and all such proceedings shall be at the suit of and in the name of the United States"

TO EXAMINE GOODS FOR EXPORT

'SEC 14 That the Secretary of Agriculture is authorized to investigate the character and extent of the adulteration of foods and drugs, and whenever he has reason to believe that articles are being imported from foreign countries which by reason of such adulteration are dangerous to the health of the

people of the United States, or are of kinds which are forbidden entry into or forbidden to be sold or restricted in sale in the countries in which they are made or from which they are exported, or which shall be falsely labeled in any respect, either by the omission of the name of any added ingredient or otherwise, or in regard to the place of manufacture, or the contents of the package, shall make a request on the Secretary of the Treasury for samples from original packages of such articles for inspection and analysis, and the Secretary of the Treasury is hereby authorized to open such original packages and deliver specimens to the Secretary of Agriculture for the purpose mentioned, giving due notice to the owner or consignee of such articles, who may appear before the Secretary of Agriculture and have the right to introduce testimony, and the Secretary of the Treasury shall refuse delivery to the consignee of any of such goods which the Secretary of Agriculture reports to him have been inspected and analyzed and found to be any of the kinds mentioned in this section. Provided, that the Secretary of the Treasury may deliver to the consignee such goods, pending examination and decision in the matter, on execution of a penal bond of the full invoice value of such goods, together with the duty thereon, and on refusal to return such goods for any cause to the custody of the Secretary of the Treasury, when demanded, for the purpose of excluding them from the country, or for other purposes, said consignee shall forfeit the full amount covered by the bond.

'Sec 15 That the term 'territory' as used in this act shall include the insular possessions of the United States

'Sec 16 That this act shall be in force and effect from and after its passage. Provided, however, that no penalties herein named shall be imposed until after the expiration of one year from the passage of the act."

To Investigate the Proprietary Association

The following resolution, introduced into the House of Representatives March 5, 1906, by Mr Gillespie, was referred to the committee on judiciary and ordered to be printed. The possibilities involved in an investigation of the bodies mentioned are interesting.

WHEREAS It is alleged that John W Jennings a citizen of the United States engaged in the sale of drugs chemicals patent medicines and proprietary articles at wholesale and retail at number eleven hundred and forty two Connecticut Avenue and number eleven hundred and thirty nine Eighteenth Street in the city of Washington, District of Columbia is being conspired and discriminated against by certain combinations in violation of the Act of Congress of July second, eighteen hundred and ninety entitled

An Act to protect trade and commerce from unlawful restraints and monopolies, namely The Proprietary Association of America an unincorporated association composed of upward of ninety per centum of all the manufacturers and proprietors of patent medicines drugs chemicals and proprietary articles within the United States whose members reside and do business in the several states of the United States The National Wholesale Druggists Association an unincorporated association composed of upward of ninety per centum of all the wholesale druggists of the United States whose members are the distributing agents for manufacturers and proprietors of patent medicines drugs chemicals and proprietary articles purchasing the same from manufacturers in the several states of the United States and in foreign markets and selling and supplying the same to retail druggists throughout the United States The National Association of Retail Druggists briefly known as the N. A. R. D. an unincorporated association having a membership composed of local associations of retail druggists and other kindred associations and

WHEREAS It is alleged that the aforesaid Jennings by reason of his non affiliation with the District of Columbia Retail Druggists Association the local branch of the aforesaid N. A. R. D. has been for several years past and is now blacklisted and thereby prevented from buying in open market any drugs patent medicines chemicals and proprietary articles manufactured or controlled by the members of the aforesaid associations and

WHEREAS It is alleged that the said discrimination and blacklisting have resulted in heavy financial loss to the aforesaid Jennings and threaten the ruin of his business and

WHEREAS It is alleged that the aforesaid Jennings on Feb 15 1905 filed before the Department of Justice a petition setting forth the aforesaid grievances and

WHEREAS It is alleged that up to the present time no action has been taken by the Department of Justice on the aforesaid petition Therefore be it

Resolved That the Attorney-General of the United States be and he is hereby requested if not incompatible with the public interest to report to the House of Representatives at his earliest convenience for its guidance all the information within the knowledge of his department which shows or tends to show that there exists now or within the past twelve months has existed a combination or arrangement between the wholesale and retail druggists and manufacturers of patent medicines drugs chemicals and proprietary articles whereby a druggist not a member of one of the aforesaid associations has been or is now being discriminated against in violation of the Act passed July 2 1890 entitled An Act to protect trade and commerce from unlawful restraints and monopolies or acts amendatory thereof also what steps have been taken by the Department of Justice looking to the prosecution of the petition of the aforesaid Jennings filed before the department on February 15 1905 as herein above set forth.

New Jersey Committee on Legislation

WILLIAMSTOWN, N. J., March 2, 1906

To the Editor —I am inclosing a list of the National Auxiliary Legislative Committee of the state of New Jersey. This committee has been named at the suggestion of Dr. Reed, chairman of the National Committee on Legislation, so that each state should be thoroughly organized, and the National Committee on Legislation should be able to reach every county in each state.

We are trying to take up the work and to do everything in our power to assist the National Committee on Legislation, and at the same time to look after matters in our own state. We have a State Auxiliary Legislative Committee, which is composed of one member from each county medical society, and we are getting in close touch with the profession's demands throughout the state.

The "patent medicine" bill has been introduced in our legislature and we are going to do everything that is possible to pass the bill.

We have taken up all the matters as suggested at the conference of the National Legislative Committee, with our senators and congressmen, and in most cases have received responses from them that they are ready to co-operate with us on all matters which we discussed at the meeting of the National Legislative Council.

New Jersey is, I think you will find, ever ready to do her part and to assist in any way possible for the advancement of the medical profession on sanitary matters.

L. M. HALSEY, Chairman

LIST OF THE NATIONAL AUXILIARY LEGISLATIVE COMMITTEE OF NEW JERSEY

Atlantic County	Dr. Edgar Darnell	Atlantic City
Bergen County	Dr. D. A. Currie	Englewood
Burlington County	Dr. W. P. Melcher	Mt. Holly
Cumberland County	Dr. J. H. Moore	Bridgeton
Camden County	Dr. Daniel Strock	Camden
Cape May County	Dr. M. F. Lummis	Holly Beach
Essex County	Dr. Ralph H. Hunt	
	29 Harrison St., E. Orange	
Gloucester County	Dr. Geo. C. Laws	Paulsboro
Hudson County	Dr. Samuel A. Helfer	Hoboken
Mercer County	Dr. Elmer Barvis	Trenton
Middlesex County	Dr. David C. English	New Brunswick
Monmouth County	Dr. D. McLean Forman	Freehold
Morris County	Dr. H. W. Klee	Wharton
Ocean County	Drs. L. C. Lindlay and W. G. Schaulfer	Lakewood
Passaic County	Dr. John L. Leal	Paterson
Salem County	Dr. W. H. Carpenter	Salem
Somerset County	Dr. John P. Hecht	Somerville
Sussex County	Dr. M. D. Hughes	Lavton
Union County	Dr. N. L. Wilson	Lilizabeth
Warren County	Dr. John C. Johnson	Blairstown

Correspondence

Interstate Reciprocity

DETROIT, March 10, 1906

To the Editor —Dr. George W. Webster states in reply to my letter in THE JOURNAL, March 3, 1906, in which I interpret his proposed plan of action to make practical his basis of reciprocity as in conflict with the authority and purposes of state medical boards, and in which also I suggest that his committee could be effective from a standpoint of education working in harmony with the Association of American Medical Colleges—as follows:

"I regret very much that Dr. Harrison seems to have utterly failed to grasp the fundamental ideas which I tried to convey, namely that the American Medical Association is desirous of assisting the examining boards and that the plan proposed is not simply a scheme of reciprocity but a proposed plan of education which, if successfully carried out, will serve as a rational foundation on which reciprocity will naturally rest."

A careful review of his article failed to find even a direct or indirect reference to the medical boards as a factor in his plan to make practical the accepted basis of reciprocity, but I do find the unequivocal statements that the basis of reciprocity can only be made effective through the Council on Education of the American Medical Association. As corroborative evi-

dence of his intent may be mentioned his ignoring completely the existence of the American Confederation which is in complete and effective possession of the field which he proposed to operate and improve. If Dr Webster were simply desirous of raising the medical board and had proposed a plan of education only he should not have ignored the two most important factors—medical boards, represented by the American Confederation and the medical colleges represented in a large degree by the Association of American Medical Colleges. I am pleased however to accept without further reservation his statement that the Council on Medical Education proposes to limit its endeavors to the educational phase of the question.

In reference to that portion of Dr Webster's reply which dealt principally with himself and his personal achievements as related to the profession and to the causes of educational reform, I have to say that I fully appreciate and gladly credit Dr Webster's great ability as well as his activity in all matters pertaining to the good of the profession, and the only criticism in my view is that I am not prepared to go the length of ascribing him in his contention that either he or the National Confederation are the authors of the present method of standard adopted by the Association of American Medical Colleges or by the American Confederation. He states that in 1901 and as late as 1904 the National Confederation of State Medical and Licensing Boards adopted his standard curriculum and that the curriculum which assigned a certain number of hours in the course to each subject, was the first curriculum to be adopted by any organization, and that it was subsequently adopted by the Association of American Medical Colleges and the American Confederation without any important modifications. Is his statement based on facts? As early as July 1900 the Michigan State Medical Board published and enforced an itemized medical standard, divided into lectures, teaching and laboratory work and in June, 1902, published a further itemized standard of both preliminary and medical education the latter divided into lectures, laboratory, and clinics, while Dr Webster's standard of three years later contains simply the total number of hours for each subject without division into lectures, laboratory, and clinics, and therefore was a much less developed method and possessed nothing of the Michigan original, except in its crudeness.

In 1904 the American Confederation adopted the Michigan method of standard both of preliminary and medical education, but postponed the final adoption of the detail until subsequent to the 1905 meeting of the Association of American Medical Colleges, in order that the standards of the Confederation of Boards and the Association of Colleges should harmonize.

As a member of, and secretary of the confederation committee in charge of the standards, I can state that Dr Webster's curriculum was not considered by the committee, or even known to have an existence. The committee of the Association of American Medical Colleges, of which Dr Kober was chairman, in its printed report, which was adopted, presented in parallel columns the proposed standard of 4,000 hours, divided into lectures, laboratory, and clinics (exactly in harmony with the Michigan method) and the Michigan standard of 4,000 hours. With some slight variation in the detail of hours per subject these standards were exactly uniform.

Looking up the last two or three years' official report of the Association of Medical Colleges I find frequent reference to the Michigan standard and method, but no reference to Dr Webster's curriculum, or the National Confederation. If those interested could see in print, for comparison, the curriculum of the National Confederation of 1903 and 1904, which Dr Webster claims as his offspring, and the standard curriculum of the Association of American Medical Colleges, and also the Michigan curricula of each year since 1900, which have been incorporated in her application forms since 1902, the fallacy of Dr Webster's claim of originality would be fully appreciated. Especially so in connection with his statement made at the Portland session last years, as follows:

"Dr G. W. Webster of Illinois said that while there had been much talk of raising the standard no real standard has as yet been established."

As an additional evidence of inconsistency in Dr Webster's claim might be mentioned the fact that the state board of

which he is president, and its most influential member, has as yet failed to adopt the method of standard which he states was originated by him in 1903, and which was actually in practical use in Michigan three years prior to this date.

In connection with the above I also desire to refer briefly to the published letter of commendation received by Dr Webster from Dr George M. Kober, in which it would appear that the latter indorses his claim that he alone of all others deserves credit for the standard curriculum, which at a later date Dr Webster denies exists.

I am pleased to note that Dr Webster, like the rest of us, is subject to the human weakness of appreciating credit for personal good works. I also received an almost similar letter from Dr Kober, with this difference, perhaps—the one letter was based on the belief and kindly appreciation for services attempted, the other on fact. While such letters are usual, proper, and often helpful, it was never contemplated by their author that they should be used in the manner Dr Webster used the one received by him. They should never be taken too seriously or literally by the fortunate recipients, besides, such letters are not material to the cause which Dr Webster and myself have at heart, and the methods of obtaining which we are now agreed on. Indeed, the discussion seems to have been diverted from the original subject of reciprocity to one of personal claims and credit, for which I do not hold myself responsible.

B. D. HARISON

Lisbon and Its People—Some Interesting Facts for Those Attending the International Congress

BALTIMORE, March 1, 1906

To the Editor.—Having received numerous letters of inquiry regarding Lisbon and its people I take this opportunity to give a few facts to those who are to attend the congress. Being well acquainted with the people of Portugal, I regret that I can not do them greater justice, but material for a medical journal has its limits.

Contrary to the general opinion, Portugal differs sensibly from Spain in its social, intellectual and moral life. Ethnographically the inhabitants of the two countries are the same race, but apart from this there is a great difference between the two races.

The primitive traits of the Portuguese have been changed by long series of mixtures between the original inhabitants and foreigners. This amalgam, which was produced during and directly after Portugal's great geographical discoveries, has brought about a physiognomic difference which is noticeable the moment the traveler reaches the Spanish-Portuguese frontier.

Throughout Portugal the national type remains the same, but the mode of life, costumes, habits and morals vary in different parts of the country. These differences are distinct, for instance, the Minhotos are cultivators of the soil, intelligent and serious in their work, but on fête days they are gay, joyous and great admirers of pretty women and jewelry. The grape pickers and winegrowers of Douro, the inhabitants of the Beira, sometimes shepherds, sometimes fishermen, are hard workers, but their tasks finished they enjoy themselves in sports and drinking. The mountaineers are a strong, virile race with meditative manners and austere morals.

One feature, however, is characteristic of all Portugal. This is the beautiful, brilliant and desirous eyes of the women. The latter are handsome, have blooming complexions and in all anatomic traits accentuate their sex. Short in stature, they are well proportioned, esthetic in carriage, opulent in physiologic functions, and have pretty, tiny feet and hands. Their shining and jetty hair makes a striking contrast to their milk white foreheads, rosy cheeks and pink lips.

Intellectually and morally the Portuguese offer an interesting melange of good qualities and bad faults. They are a lovable race when you know them well. They are invariably kind to the poor, gentle to their beasts, and open hearted to the properly introduced foreigner.

It is announced that the members of the congress will be invited to witness a bullfight in Lisbon. I advise everyone to go. You may with perfect security to any sensitiveness take your wives and daughters. A Portuguese bullfight differs

from a Spanish bullfight as much as a game of bean bag differs from a college football game. There is no bloodshed, nothing repugnant, but plenty of hilarity, and frequently great athletic ability is displayed by men, horses and bulls. On the short horns of the latter are placed large rubber balls. Sometimes the horse manages to kick the bull in the ribs, when he utters a roar of indignation and returns the insult by butting the horse with his rubber buffers. This pleases the risible centers of the happy Portuguese and the bullfight is over.

There is much that pertains to the Orient in the customs and architecture of Portugal, and the many social laws are, undoubtedly only modified conditions that existed when the Moors ruled the peninsula.

The higher classes in Lisbon and Oporto well appreciate the value of educating their daughters, yet conditions are such that the girls must be confined to conventual supervision. In order to maintain this oversight on the young women, yet have them free to enjoy the learning of other countries, they are taught by English and Irish women. The great convent schools of Bom Sucesso and Salesias, where the girls of the best society are sent, are controlled exclusively by English and Irish sisters.

This naturally brings me to what I shall have to confine myself in this article—educational matters—though I feel no adequate justice can be done to the charming Portuguese people by neglecting to tell of their home life, or of the struggle educated people, including the king, are making for freedom in religious thought.

There exists in Portugal only one educational institution bearing the honor and title of a university. This was founded in Lisbon in 1288 and transferred in 1307 to Coimbra (pronounce, but do not indite, *Quimbre*). A bull of Gregory XI was issued October, 1376, which authorized the university to give degrees in letters and theology. In 1377 the university was again transferred to Lisbon, but 200 years later removed to its former home, Coimbra, where it has remained. It has been the battleground for science and religion through many a century. In 1830 came the great movement of the reformers and then were established under the direct control of the government the departments of medicine, law and the arts. Gradually it became a school of modern ideas, and has kept well up in the progress of nations.

The university is composed of five faculties: medicine, law, theology, mathematics and physics. This last faculty has under its control all instruction in the natural sciences and attached to it are excellent botanical and zoological gardens. The chairs of Greek and Hebrew are under the charge of the theological faculty. The university buildings are massive, handsome and unique in their architectural designs. They should be well studied, for nowhere throughout the world will the traveler find their equal. The library is large, its decorations are rich and immensely valuable, and combine all the Oriental splendor of the Alhambra with the utility of the libraries in St. Mark's, Venice.

The course of instruction at the great Portugal university is essentially modern in that it is free from church interference and generously supported by the state. The professors and those foreigners who are invited to talk to the students have the freedom of the air to say what they think. (This in some respects differs from a few of our universities.)

The professors of Coimbra, all Portuguese, are divided into fifty-three lecturers (*lentes*) and twenty-two associate lecturers (*substitutores*). The members of the different faculties are designated by their capes and hats, as follows: Medicine, yellow, 18 members; law, red, 21 members; mathematics, blue, 13 members; philosophy, blue and white, 11 members; and theology, white. On all official occasions and at examinations the professors are dressed in their distinctive robes and hats. The students are obliged to wear a uniform of black cloth composed of short breeches, cape and black hat, of a disgraceful shape and size. For this latter reason the students go bareheaded except on official occasions.

The last statistics show that there are 1,180 students in all departments, divided as follows: Law, 510, mathematics 130, medicine (and pharmacy) 140 and in the natural sciences,

300, while it will undoubtedly surprise many readers to learn that in the department of theology there are only 40 students.

The course is five years, and the charge for instruction about \$30 a year, except in medicine, where it is somewhat greater. The minimum age is 16 years, but the average age of the students is about 19. Women are rarely seen at the university, the woman of eunuchal tendency not yet having arrived at Portugal. One lone woman of mixed inheritance received a degree of philosophy in 1894. She has disappeared. There are few foreigners at the university, unless we class the Brazilians as such. These latter of Portuguese blood, attend in large numbers.

In Oporto there is a school of medicine where instruction is of a high type. No degrees are conferred by this school, applicants having to pass the examination at Coimbra.

WILLIAM LEE HOWARD, M.D.

The Physician and the Pharmacopeia.

NEW YORK, Feb 18, 1906

To the Editor—I thank you for your courtesy in printing my letter with the above title in your pages (February 17, p 526). Your answer, however, requires a reply on my part. You say "We do not believe anyone suggests that we should be limited to Pharmacopoeial preparations." And further you make the statement "Our correspondent, like too many others, has set up a straw man to knock down." Now, I am not given to setting up straw men, and I am not very likely to make absurd statements, when the subject of proprietary remedies is under discussion, as I have studied the question from all sides, in all its phases, and at a time when too many who show now such commendable zeal on the subject were an absolute *terra incognita*. I could name you a dozen good, but ignorant men, who just did show themselves so narrow minded and so bigoted as to condemn—condemn utterly—every proprietary and non Pharmacopoeial preparation. But I can do better than that. In THE JOURNAL of the American Medical Association, January 20 (p 221, col 1), Dr Frank G. Wheatley makes the statement that "the time has come when there are no ethical preparations. We should ignore the whole list. If we will confine our prescribing to articles recognized by the national authority, [The Pharmacopeia], we shall confer one of the greatest boons on the public, and incidentally on ourselves, that the annals of medicine record." And on the same page, column 2, Dr James C. White is reported as saying, that "though in practice fifty years he had never prescribed a single remedy outside of those contained in the Pharmacopeia." (I wonder if he used cocaine between 1884 and 1894, as it was only in the latter year that cocaine became official, while Koller discovered it in 1884.) So you see, there are men, so ill informed, so narrow minded, as to advocate the non use of any non Pharmacopoeial preparations. And it was against them that my letter was directed. For I fear that through excess of zeal, through misdirected energy, through intemperate statements of ill informed persons, who are not familiar with the actual needs of the every day practitioner, our entire work, our labor for years, may go for naught.

WILLIAM J. ROBINSON, M.D.

Poison Ivy

WASHINGTON, D. C., March 6, 1906

To the Editor—In THE JOURNAL, Jan 27, 1906, page 301, you quote from the Cincinnati Lancet-Clinic from an article by Dr E. S. McKee on the subject of poisoning by poison oak or ivy. Is it possible that the work of Pfaff, published in the Journal of Experimental Medicine (1897, vol 11, No 2), is not yet known to the profession?

Dr McKee "has been poisoned twice by these plants and feels that he knows many times more about the trouble than he possibly could have known had he not had this experience." I have been poisoned about eighty times and feel that I also know something of the condition.

As a result of the work of Pfaff, we know that the irritant substance of *Rhus toxicodendron* and *Rhus venenata* is a fixed oil which is soluble in alcohol and which is precipitated by lead subacetate. The oil is similar to cardol, but is probably not

identical. The use of lead salts in dermatitis resulting from action of the oil is rational but the precipitated lead compound must be removed from the skin as it is gradually decomposed, the oil is set free and its action continues.

The use of soap and water and a good hand brush is the simplest method of getting rid of the oil. The action is entirely mechanical and is perfectly efficient. Alcohol dissolves and removes the oil but successive portions must be allowed to flow over the affected part, as after contact, the alcohol may contain sufficient oil to spread the irritation. Ordinary alcohol must be used and not 90 per cent alcohol as the latter does not dissolve the oil. The action is purely a solvent one and not one of neutralization.

In every case the above methods of treatment are at once effective. Further irritation is stopped and healing of the lesions begins. In some cases when actual sloughing has taken place a week or two may be necessary for complete healing but ordinarily two or three days' time is sufficient. The use of ointments or fatty substances is both theoretically and clinically wrong as such substances serve only to spread the oil.

It should be remembered that the clothing may have been in contact with the plants and that oil may be transferred from it to the skin and the irritation continued in this way. I have been prevented by handling shoes worn while collecting the plants a year previously. Pollen from the flowers contains sufficient oil to give rise to a dermatitis in unusually susceptible persons.

A. W. BARTCH

P. A. Surgeon, United States Navy

American Association of Medical Journal Advertisers

MEMPHIS, TENN., March 10, 1906

To the Editor:—I am sending herewith for publication in *THE JOURNAL* copy of constitution of the American Association of Medical Journal Advertisers. This constitution has been agreed on through correspondence between the medical directors of a number of institutions as the basis of a temporary organization to stand until the annual meeting to be held in connection with the session of the American Medical Association in June. It will come up for confirmation or amendment at that meeting. Owners or superintendents of institutions who are in accord with the objects of this organization, who have not already been reached by direct correspondence, are requested to send their application for membership to the secretary.

GEO. F. PITNEY, Secretary

CONSTITUTION OF THE AMERICAN ASSOCIATION OF MEDICAL JOURNAL ADVERTISERS

NAMES

This Association shall be known as the American Association of Medical Journal Advertisers.

OBJECT

To assist in maintaining proper ethical standards and for the advancement of truth and of honorable dealing.

To establish and promulgate definite rules of conduct with reference to various questions which arise in institution work which questions are left open to more or less doubt and to variable constructions by the general provisions of the Principles of Medical Ethics of the American Medical Association.

MEMBERSHIP

Membership in this association shall be limited to physicians who are responsible owners, superintendents or medical directors of reputable institutions devoted to the treatment of mental and nervous diseases and of alcohol and drug addictions who subscribe to the Principles of Medical Ethics of the American Medical Association.

OFFICERS

The officers of the association shall be a president, a vice president and a secretary, who shall be elected annually at a meeting to be held at the time and place of session of the American Medical Association and shall hold their offices for one year and until their successors are elected.

The president and vice president shall discharge such duties as are incumbent on a presiding officer.

The secretary shall be the executive officer of the association and shall conduct the correspondence, keep the records and transact such other business as may be committed to him by vote of the Association or by direction of the executive committee.

The president, vice president and secretary and two other members to be elected annually, shall constitute an executive committee who shall have authority to pass on and decide all matters affecting the interest of members or applicants for membership, which may arise and require action in the intervals between the meetings.

The secretary shall keep an account of the expense incurred in conducting the correspondence and in carrying out any other orders of the association and the same shall be prorated among the members and paid annually.

MEETINGS

This association shall meet annually at the time and place of meeting of the American Medical Association.

GENERAL PROVISIONS

Since advertising in medical journals is the principal means the members of this association have in bringing their work to the notice of the profession and since it is unsatisfactory and unfair for men who have won an honorable place in the profession by conscientious and diligent study and by honorable and fair dealing to be brought into competition, on terms of equality, with irregular and disreputable institutions as is done when the advertisements of such disreputable institutions appear in the pages of the same journals containing the cards of institutions of good standing, therefore the members of this association pledge themselves not to run an advertisement in any medical journal or medical directory which admits to its pages the advertisements of irregular institutions.

Any institution or physician guilty of any of the following acts shall be deemed irregular for the purposes of this organization:

1. Use of a secret remedy or secret form of treatment.
2. Publishing testimonials of cures.
3. Guaranteeing cures.
4. Sending out prepared or home treatments for drug addictions.
5. Paying commissions to physicians for sending patients.
6. Advertising in the lay press in any manner except the insertion of a simple card giving the name and location of the institution or physician, class of patients treated, office hours of the superintendent or medical director and telephone number, provided however, that the publication of such cards shall be confined to the lay press of the county in which the institution or physician is located.

[*Explanatory Note*—The reason for each of the provisions above given would seem sufficiently clear, except probably the fourth. To those who have not given attention to such matters it might seem that to prohibit the sending out of home treatments for the drug addictions would be an unreasonable restriction and one that would interfere with the natural rights of individuals and of physicians, but that is not the purpose of the rule. The reason for such restrictions is this: In almost every instance remedies advertised as home cures for the morphin and other drug addictions are merely some concealed form of opiate. It is not difficult to switch the drug user from his morphin or other opiate on to the "cure," which he is assured is merely a harmless tonic. This assurance he accepts as true and under the belief that he has been freed from his drug slavery and in the buoyancy and hope that such a deliverance would bring he writes glowing testimonials of his cure while still under the influence of the supposedly harmless tonic. When he attempts to leave off this tonic, he finds that he is totally unable to do so in fact that he is as much a slave to the "cure" as he was to his original drug and that now, instead of being able to buy his drug supply in the open market at a reasonable price, he is compelled to send ten or more dollars per month to his home cure vendor for his drug supply, as he can not readily leave it off and resume his former drug. These "cures" usually contain a combination of narcotics by the use of which the victim acquires a double or triple addiction instead of the single one which he had before the use of such "cure." These home treatments do not really cure the morphin or other drug addiction. This fact is known to their vendors as well as to us therefore we are compelled to conclude that one who continues to advertise and send out such a "cure" does so with fraudulent intent and is therefore unworthy of association with gentlemen and should not be allowed to practice his deception on an unsuspecting public by using space in the columns of medical journals.]

Marriages

W. H. BURKE, M.D., Prairieburg, Iowa to Miss Dolan recently

WILLIAM H. BUTTRAM, M.D., to Miss Cora Tipton, both of Viola, Tenn., recently

W. J. WEST, M.D., Knoxville, Tenn., to Miss Alice V. Naylor of Little Rock, Ark., March 1

WILLIAM M. COOLEY, M.D., to Miss Ella Victoria Engstrom both of Peoria, Ill., February 21

GEORGE LAMB BLIST, JR., M.D., to Miss Adelaide Richardson, both of Brooklyn, N. Y., February 27

WILLIAM JESSE JENNINGS, M.D., to Miss Sarah Tillman Flowers, both of Milledgeville, Ga., March 6

SCHUYLER COLFAX GRAVES, M.D., Grand Rapids, Mich., to Miss Caroline E. Launt of Walker Township

HARRY F. RUBEL, M.D., to Miss Clara Sander, both of Le Mars, Iowa, in Sioux City, Iowa, February 26

FRANK THOMAS RIDLEY, M.D., Fredericks, Va., to Miss Nellie Morris Godwin of Charlottesville, Va., March 14

A. LEO FRANKLIN, M.D., Cumberland, Md., to Miss Ieha Weston Jordan at Charlestown, W. Va., March 8

H. B. JOHNSON, M.D., Pomona, Kan., to Miss Agnes Charlotte Thestrup of Williamsburg, Kan., March 6

RALPH WALDO LOBENSTINE, M.D., New York City, to Miss Anne Munroe Williams of Ocala, Fla., at Flushing, N. Y., March 8

Deaths

Charles Augustus Lindsley, M.D., one of the foremost sanitarians of America, died suddenly at his home in New Haven, Conn., March 9, aged 79. His death was due to heart disease, from which he had suffered for several years. He was born in Orange, N. J., Aug. 19, 1826, was graduated from Trinity College, Hartford, with the degree of A.B. in 1849, and received his M.A. degree in 1852. He studied medicine at the College of Physicians and Surgeons in the City of New York and in the Medical Institution of Yale College, New Haven, and was graduated from the latter institution in 1852. From 1860 to 1883 he was professor of materia medica and therapeutics at this institution, from 1883 to 1897, professor of theory and practice of medicine, and thereafter emeritus professor, dean of the faculty from 1893 to 1895, and lecturer on sanitary science from 1898 to 1899. He was attending physician at the Connecticut State Hospital from 1864 to 1876, and secretary of the General Hospital Society of Connecticut from 1865 to 1877. He was health officer of New Haven from 1874 to 1888.

His society affiliations were numerous, he was president of the New Haven Medical Association in 1877, president of the New Haven County Medical Association, 1875-1876, president of the Connecticut Medical Society in its centennial year, 1892. For many years he was a member of the American Medical Association and its vice president in 1890, and orator in State Medicine in 1892, vice president of the American Public Health Association in 1877, and president of the International Conference of State and Provincial Boards of Health from 1893 to 1895. He was also an honorary member of the state medical societies of New York and New Jersey.



C. A. LINDSLEY, M.D.

He was made a member of the Connecticut State Board of Health in 1878, and has been its secretary and executive officer since 1884. He has been vice-president and president of the New Haven Dispensary from the time of its foundation in 1872. He has been a prolific writer on subjects connected with public health and sanitation. His greatest work was as secretary and executive officer of the State Board of Health, which under his wise administration has become one of the most noteworthy in the United States. Dr. Lindsley was also a pioneer in the investigation of typhoid fever epidemics in the state.

Semon R. Hewett, M.D. Rush Medical College, Chicago, 1867, local surgeon at Charles City, Iowa, of the Chicago, Milwaukee & St. Paul Railway, health officer of Charles City, a member of the International Association of Railway Surgeons, Austin Flint Cedar Valley Medical Society, and for many terms president of the Floyd County Medical Society, assistant surgeon in the United States Marine Hospital Service during the Civil War, died at his home in Charles City, March 4, from heart disease, aged 75.

Henry Emory Rothe, M.D. College of Physicians and Surgeons in the City of New York, 1880, deputy county physician of Hudson County from 1879 to 1895, hospital steward during the Civil War, treasurer of Harrison, N. J., and assessor of the Third Ward of Newark for nine years, died at his home in Harrison, Newark, March 4 from cerebral hemorrhage, after an illness of six days, aged 65.

Lewis Williams, M.D. Miami Medical College, Cincinnati, 1877, a member of Grunt County (Ind.) Medical Society, died at his home in Marion, March 5, after a long illness from senile debility, aged 89. The medical society held a special meeting March 7, passed resolutions regarding the death of Dr. Williams and voted to attend the funeral in a body.

John F. Dyer, M.D. Medical Department of Western Reserve University (Cleveland) 1902, a member of the American Medical Association, the North Texas Medical Society, and president of the Lamar County Medical Society in 1904, formerly a practitioner of Choctaw, Texas, died at his home in Mineral Wells, Texas, Nov. 23, 1905, aged 39.

Henry T. Calkins, M.D. University of Louisville, Medical Department, 1869, said to have been the oldest practitioner in northern Michigan, a member of the American Medical Association and of the Michigan State Medical Society, division surgeon of the Grand Rapids & Indiana Railroad, health officer of Petoskey, Mich., died suddenly at his home in that city, from heart disease, March 5.

Charles Boaz Whitfield, M.D. College of Physicians and Surgeons in the City of New York, 1871, member and some time president of the Marengo County (Ala.) Medical Society, a veteran of the Civil War, was found dead in the road about five miles from his home in Demopolis, Ala., March 1, supposedly from heart disease, aged 67.

James M. Selfridge, M.D. Jefferson Medical College, Philadelphia, 1856, one of the founders of Fabiola Hospital, Oakland, Cal., attending physician to the State Institution for the Deaf, Dumb and Blind from 1872 to 1878, died at his home in Oakland, March 4, from cancer, after an illness of several years, aged 81.

Arthur R. Cobb, M.D. Hahnemann Medical College, Philadelphia, 1891, of Philadelphia, died in the Hahnemann Hospital in that city, March 2, from injuries received as a result of jumping from the window of a cottage in Cape May, N. J., February 17, while suffering from delirium consequent on overwork, aged 35.

R. C. Volker, M.D. Central College of Physicians and Surgeons, Indianapolis, 1872, formerly medical director of the St. Louis, Iron Mountain & Southern Railway, and in charge of the railway hospital at Fort Smith, Ark., died at his home in St. Louis, February 22, after an illness of six months, aged 67.

Martyn Taylor, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1852, one of the oldest practitioners of Scioto County, Ohio, acting assistant surgeon in the Army during the Civil War, died at his home in Sciotoville, March 3, after an illness of several weeks, aged 78.

Frank L. Wisdom, M.D. New Orleans School of Medicine, 1860, captain and surgeon in the Confederate service during the Civil War, and chief of staff at the Division Hospital, Brunswick, Ga., in 1861, died suddenly at his home in Texarkana, Texas, March 1, from heart disease, aged 70.

Ira H. Gillum, M.D. Rush Medical College, Chicago, 1874, a veteran in the Civil War, a member of the Indiana legislature, chairman of the Iroquois County (Ill.) board of supervisors, and alderman of Milford, Ill., died at his home in that city, March 7, from cerebral hemorrhage.

John Harris Pettee, M.D. Harvard University Medical School, Boston 1897, of Boston, died at the home of an acquaintance in Newton Highlands, Mass., from general collapse, due to worry over the publicity attending his connection with the "dress suit case mystery," March 5.

John Phillips, M.D. Medico-Chirurgical College, Philadelphia, 1904, of Lackdale, Pa., formerly resident physician in the Allentown Hospital, died in the Lebanon Hospital, February 23, from septicemia following a mastoid operation, after an illness of three weeks, aged 28.

David D. Richardson, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1871, chief resident physician of the State Hospital for the Insane, Norristown, Pa., died suddenly from heart disease, in his apartments at the hospital, March 6, aged 60.

John P. Cotton, M.D. Medical College of Ohio, Cincinnati, 1842, a member of the American Medical Association, and for more than sixty years a practitioner of Charleston, W. Va., died at his home in that city, March 3, after a lingering illness, aged 85.

John Eaton Pugh, M.D. Tulane University of Louisiana, Medical Department, New Orleans, 1853, of Albemarle, La., surgeon in the Confederate service during the Civil War, died at the home of his son in law, near Napoleonville, La., February 27.

James L. Jones, M.D. Montana State Board, 1889, coroner of Beaverhead County for two terms and county physician in 1892, died at his home at Wisdom, Mont., February 25, from heart disease, after a prolonged illness, aged 48.

C. R. Mason, M.D. Cincinnati College of Medicine and Surgery, 1870, one of the wealthiest practitioners of Hartford City, Ind., was found dead in his office, March 7, aged 60.

Simon G. Miller, M.D. Bellevue Hospital Medical College, New York City, 1874, of Francis, Fla., was run over by a train near his home and instantly killed, January 17, aged 50.

Andrew A. Naegeli, M.D. Medical College of Indiana, Indianapolis 1885, one of the foremost practitioners of Sibley County, Minn. died at his home in Gibbon, from dilatation of the heart March 3, after an illness of only a few hours, aged 61.

J. P. Bowers, M.D. University of Louisville, Medical Department 1872, of Fort Worth, Texas, committed suicide at San Antonio, Texas, by cutting his throat, February 27, while despondent from ill health and financial reverses, aged 61.

Robert C. Hutchinson, M.D. Department of Medicine of the University of Pennsylvania Philadelphia 1880, surgeon of the Army in his steamship *St. Louis* died at sea, from pneumonia, February 27, after a short illness, aged 49.

Joseph A. Tipton, M.D. New York University New York City 1880, surgeon both in the Confederate army and navy during the Civil War died at his home in Roanoke, Va., March 5, after a long illness, aged 69.

Stanford V. Adams, M.D. University and Bellevue Hospital Medical College New York City 1899, police surgeon of Mount Vernon, N. Y. died at his home in that city, March 7, after an illness of three months, aged 29.

Stuart A. Watson, M.D. University of Louisville, Medical Department 1873, a prominent practitioner of Bastrop County, Texas, died at his home in Hgin, March 3, from pneumonia, after an illness of eight days.

Matthew Wallace, M.D. University of the Victoria College, Coleridge Ont. 1881, died at his home in Toronto, March 3, from pulmonary disease for which an operation was performed in September last, aged 57.

George W. Williams, M.D. Missouri Medical College, St. Louis 1818, one of the oldest practitioners of Missouri, died at his home in Farmington March 2, from senile debility, after a short illness, aged 87.

Isaac Newton Brown, M.D. Eclectic Medical Institute, Cincinnati, 1860, a surgeon in the Civil War, died at his home in Ironton Ohio March 1, from long standing disease of the throat, aged 66.

Thomas A. Davis, M.D. Tulane University of Louisiana, Medical Department, New Orleans, 1851, of Selma, Ala., died in Tusculoosa Ala. February 27, from influenza, after a short illness, aged 82.

Charles H. Witham, M.D. Medical School of Maine at Bowdoin College, Brunswick, 1875, a practitioner of Boston, died at his home in Cambridge, Mass., Dec. 24, 1905, aged 51.

Joseph Torkington, M.D. Jefferson Medical College, Philadelphia, 1885, died at his home in Pawtucket R. I., February 27, from pneumonia, after an illness of one week, aged 56.

Theodore F. Laing, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1883, of Locust Grove, Ga., died at a private sanitarium in Atlanta, Ga., March 2, aged 61.

Solomon Baird Wolfe, M.D. Shelby Medical College, Nashville, Tenn., 1862, of New York City, died suddenly from heart disease in his office, Dec. 14, 1905, aged 61.

Alexander P. Landry, M.D. Harvard University Medical School, Boston, 1870, died at his home in Eel Brook, Yarmouth, N. S., Nov. 6, 1905, after an illness of six weeks.

Elmer W. Heltman, M.D. Toledo (Ohio) Medical College, 1886, an oculist of Toledo, died at his home in that city, March 3, after an illness of six months, aged 44.

William Stross, M.D. Miami Medical College, Cincinnati, 1903, died recently at his home in Cincinnati from chronic nephritis after a prolonged illness, aged 48.

George W. Pleasanton, M.D. Hahnemann Medical College, Philadelphia, 1887, died suddenly at his home in Milford, Del., February 26, from heart disease, aged 45.

Miles Laha, M.D. Hospital College of Medicine, Louisville, 1893, died at his home in New Haven, Ky., February 21, from tuberculosis, after a long illness, aged 48.

William E. Swiler, M.D. Jefferson Medical College, Philadelphia, 1857, died at his home in Mechanicsburg, Pa., March 8, from cerebral hemorrhage, aged 73.

Vandy M. Neal, M.D. Tulane University of Louisiana, Medical Department, New Orleans, 1860, died at his home in Hillsboro, Miss., December 19, aged 70.

W. H. Burke, M.D. Rush Medical College, Chicago, 1902, of Prairieburg, Iowa, died March 1 from pneumonia, after an illness of less than two weeks.

Mabel Wells, M.D. Medical Department of the Johns Hopkins University, Baltimore, died at her home in Wellesley, Mass., March 3, aged 32.

Richard H. Kenning, M.D. College of Physicians and Surgeons, Manitoba, Winnipeg, 1883, died at his home in Chicago, March 6, aged 58.

James Macdonald, M.D. Harvard University Medical School Boston, 1864, died at his home in Boston, March 8, from heart disease, aged 73.

William H. McCormick, M.D. Jefferson Medical College, Philadelphia, 1864, died at his home in Cumberland, Md., March 6, aged 80.

David M. McFall, M.D. Jefferson Medical College, Philadelphia, 1857, died at his home in Nashville, Tenn., Dec. 20, 1905, aged 72.

James Gates M.D. University of Louisville, Medical Department, 1882, died at Ll Paso, Texas, Oct. 22, 1905, aged 71.

Nelson H. Church, M.D. Rush Medical College, Chicago, 1866, died March 5, at his home in Chicago, aged 63.

Eugene S. Atwood, M.D. Rush Medical College, Chicago 1877, died at his home in Chicago, March 2.

Deaths Abroad

Max Nitze, M.D., professor of urology at Berlin and inventor of the cystoscope, died suddenly, February 22, aged 51. The twenty-fifth anniversary of this invention was celebrated in March, 1901, when honors were showered on Nitze, who was then only a privat docent.

Leon Colin, M.D., formerly inspector general of the French military sanitary service, and president of the Académie de Médecine, died recently at Paris.

Book Notices

MANAGEMENT OF A NERVE PATIENT. By A. T. Schofield, M.D. Author of 'The Unconscious Mind,' 'The Force of Mind,' 'Unconscious Therapeutics,' etc. Cloth. Pp. 267. Price, \$1.50. Philadelphia: P. Blakiston's Son & Co. 1906.

This little volume is largely in the same line as that of Dr. DuBois (which we reviewed March 10, page 744), and contains a valuable amount of useful suggestions and hints. The author does not discard medical and physical treatment, however, to the same extent or reject hydrotherapy and electricity, as does DuBois. These all play a more or less prominent part in his therapy, and he considers that mental treatment has in it the danger of leading the specialist to consider it too much of a cure all in itself. Every curative agent, he says, has more claimed for it than it deserves, and this is pre-eminently true of mental action in disease. He does not enter much into the psychology, but has much to say about the unconscious mind and thinks that certain individuals possess a sort of healing gift, he thinks this may be explained by some action on this unconscious mind. However one may view this as a vagary or otherwise, the main part of Schofield's work is sensible and clear and can be profitably read by the medical practitioner. In this country legitimate psychotherapeutics is not necessarily in discredit, however it may be in England, that country, he says, is so overrun with an invasion of American mystics (Eddyites?), that it is hard to obtain for psychotherapy a respectful hearing among medical men. It would be a good thing, however, if a little more systematic instruction on these points in psychic therapeutics were included in the medical curriculum, both here and elsewhere.

A TEXT BOOK OF PHARMACOLOGY AND THERAPEUTICS, or the Action of Drugs in Health and Disease. By A. R. Cushny, M.A. M.D. Fourth Edition. Thoroughly Revised. Illustrated with 52 Engravings. Cloth. Pp. 752. Price, \$3.75 net. Philadelphia: Lea Brothers & Co. 1906.

This work has been revised to conform with the new Pharmacopoeia and seems to be confined to pharmacopoeial preparations. The general arrangement of the text is the same as in previous editions. Part I is devoted to a consideration of organic substances acting locally. Part II takes up organic substances which act after absorption, and considerable space is occupied by discussion of the various anesthetics. Alcohol is mentioned under this head and attention is directed to the dangers attending the use of wood alcohol. In the chapters on ether and chloroform reference is made to Embley's researches, showing that fatal arrest of the heart's action frequently occurs at the beginning of the anesthesia through excessive inhibitory action. Acetamid, though official in the U. S. Pharmacopoeia

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under this name, is referred to as antifebrin, the name by which this drug is known in the British Pharmacopeia. Part III deals with the alkalis, alkaline earths, acids and allied bodies. Part IV is devoted to a consideration of the heavy metals, and in Part V ferments, secretions and toxalbumins are discussed. Part VI takes up menstrua and mechanical remedies, and the book concludes with a classification of drugs according to their therapeutic action. Cushman's textbook has long been recognized as a standard and the new edition will add to the prestige it had already earned.

SURGICAL ASPECTS OF DIGESTIVE DISORDERS. By J. G. Mumford, M.D. In Association with A. K. Stone, M.D. Cloth. Pp. 395. Price, \$2.50. New York: The Macmillan Co. 1905.

The title of this book does not suggest its real contents. The first chapter describes "ancient conceptions of the digestive organs." It is a brief history of our knowledge of these organs. The second is an account of methods of clinically studying diseases of the stomach, such as physical, chemical, microscopic and x-ray examinations. The chapters following, however, are the ones which give greatest value to the book. The authors are to be congratulated on having written a readable and unusually instructive book. It is not a systematic treatise on diseases of digestive organs, but a collection of new facts and well known ones bearing on the natural course and results of certain diseases and on the relative success of different kinds of treatment. It is quite as interesting and instructive to the physician as to a surgeon. The following titles of succeeding chapters will best explain the scope of the book: "The Stomach", "Dilatation of the Stomach Treated Without Operation", "Ulcer of the Stomach and Duodenum", "Operative Intent of Non Malignant Disease of the Stomach", "Cancer of the Stomach", "The Bile Passages", "Surgery of the Bile Passages", "The Pancreas", "Abdominal Ptosis", "The Appendix Vermiformis."

There is in these chapters much statistical matter which is new, well analyzed and important. The judgments of the authors are conservative and rarely deserve criticism.

REFRACTION, Including Muscle Imbalance and the Adjustment of Glasses. By R. S. Copeland, A.M. M.D. and A. E. Ibershoff, M.D. Cloth. Pp. 144. Price, 1.50 net. Philadelphia: Boericke & Tafel. 1906.

Although within recent years there have been many publications dealing with the problems of refraction, muscular insufficiency and the correct adjustment of lenses for ocular purposes, we believe that none of them is better suited to the beginner than this small work. It is sufficiently illustrated with good, clear cuts, and the literary portion of it is everything that one could desire. No doubt the authors might easily have added to (or, perhaps, padded) their small work, but in the absence of such elaboration we believe that it will have a wider sale than many a larger treatise. If we were disposed to criticize the work from the textbook standpoint the principal objection we would raise is to the small space devoted to skiascopy. That important objective test is not as carefully or as fully considered as it ought to be. On the whole, however, the book is a very useful compendium and can be safely recommended to students of elementary ophthalmology.

MANUALE DELLE MALATTIE DELL' OCCHIO. Ad Uso Degli Studenti F. Del Medico Pratico Traduzione Italiana Sulla Quarta Edizione Americana. Con note ed Aggiunte del Dr. Edmondo Trombetta and Dr. Carlo Enrico Mar. Con 360 illustrazioni originali e 21 Tavole con 70 figure colorate. Cloth. Pp. 555. Price 8 lire. Turin: S. Torino: Unione Tipografico-Editrice. 1906.

This is the Italian translation of Dr. C. E. Mar's well known work on diseases of the eye, with notes by Dr. Trombetta, instructor in ophthalmology in the University of Turin. It does not differ in any essential respect from the original work, so well known to American students of ophthalmology. As stated in the Italian edition a number of additions have been made to this textbook of which Italian readers will reap the benefit. We have reviewed the various editions of this excellent work of Dr. Mar's and have nothing to add to what has been previously said, except that we have reason to congratulate ourselves that the writings of American authors are beginning to be better appreciated in foreign countries than they have been in times past. We hope and believe that the Italian edition will receive as cordial a welcome as the four American, one British and the German editions of this popular manual.

Miscellany

Epidemics of Yellow Fever in Maryland.—At the last meeting of the General Alumni Association of the University of Maryland, Dr. James Carroll read an interesting paper on this subject. He referred first to the fact that Dr. Nathaniel Potter, a pupil of Dr. Benjamin Rush, and first professor of medicine in the university, held the view that yellow fever was not directly contagious. Dr. Potter believed that he was the only person in America who held that opinion at that time and prepared to defend his belief in an inaugural thesis to be read at the commencement exercises of the University of Pennsylvania. He was dissuaded from this, however, on the grounds of propriety and expediency. Dr. Carroll said that on account of its importance as a seaport, Baltimore must have been the seat of many outbreaks of this disease, yet the only recorded epidemics occurred in the years 1794, 1797, 1800 and 1819. He called attention to the important fact that all the epidemics originated at Locust Point or along the wharves and can be traced directly to the shipping. This is not to be wondered at, as the city was in constant communication with the West Indies. In these days yellow fever was frequently confounded with malaria, and it was sometimes contended that the two diseases were identical. The general restriction of the disease to certain localities and the fact that persons who visited these localities even for only a few hours proved that the disease was one of locality. It was also observed that if the wind blew strongly from the infected district toward the city, within a few days yellow fever appeared in the city. From this it was concluded that the poison must exist in the atmosphere and must be transported by the wind. It was recorded by a Baltimore physician that during an epidemic mosquitoes became an intolerable pest, while only a short time before no mosquitoes were observed. This observation, Dr. Carroll states, agrees with our present knowledge of the facts that the yellow fever carrying mosquitoes can be conveyed by vessels from one place to another, that in the warmer seasons they breed on shore and that they become infected only after feeding on a patient. This also explains why shipping localities were infected while other places equally favorable for the development of the disease escaped. In the epidemic of 1794 Dr. Drysdale reported that he saw his first case August 7, at Bowley's wharf, and that on August 14, 20, 22 and 23, he saw five additional cases at the same place. Other interesting references to this epidemic were published by Dr. John B. Davidge. Three physicians investigated the cases reported by Dr. Drysdale and stated that the disease was "the common epidemic of the season," "the bilious remittent fever." The outbreak of 1819 followed the arrival of an infected ship from Havana. The fever appeared in July and persisted till the end of October. Among the records of this epidemic are letters and other documents published by order of the mayor, and containing the actual experiences of several physicians. These records show a remarkable unanimity of belief that yellow fever was not contagious.

Foundation of a Medical Society for Demonstrations Only.—At the meetings of most medical societies the demonstration of patients and specimens is secondary in importance to the discourses. When too much attention is devoted to them, the scientific papers are belated. A number of physicians in Berlin have organized an informal society for demonstrations only, each demonstrator being limited to ten or fifteen minutes and only five minutes being allowed for discussion at the time. When it is desired to have discussions exceed this limit they must be transferred to the arena of the already established medical societies. The first meeting of the new organization was held in January. Among others, Brieger exhibited specimens of syphilitic lesions of the liver, simulating tumors, while Karewski presented some patients with these lesions, incorrectly diagnosed at first. Albu exhibited cases of stenosis of the pylorus and Pinkus demonstrated the *Spirochaeta pallida*. The society bears the euphonious name of the "Zwangslose Demonstrationsgesellschaft." The description in the *Allg. Med. Ct. Ztg.* states that the meetings are held at the amphitheater, Ziegelstrasse 18.

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SOCIETY PROCEEDINGS

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Where a local anesthetic can be used he is in favor of it. He has used local anesthesia in children as young as 6 years for cauterization operations. For children over 13 and for adults he uses local anesthesia whenever possible.

Dr. DERRICK C. VAIL, Cincinnati, believes in giving a general anesthetic for these operations, because most of them are major procedures and should, if possible, be done in hospitals in reference to the removal of ordinary adenoids and uncomplicated tonsils without general anesthesia. After an experience of ten years in the use of chloroform he has practically discarded it except in cases requiring careful dissection of the tonsils in young children.

Dr. JOHN F. BARNHILL, Indianapolis, said that in the average case adenoids can be removed so simply and quickly, and painlessly, under local anesthesia, we are not justified in giving a general anesthetic. However, the personal equation is an important factor.

Dr. GEORGE F. KEIFER, Lafayette, Ind., has never found it necessary to have complete anesthesia for the removal of tonsils or adenoids, because when there is complete general anesthesia the danger from the anesthetic itself is greatly increased.

Dr. WILBUR W. BULLETTE, Pueblo, Colo., reported the death of a child, 6 years of age, from general anesthesia for the removal of adenoids and tonsils, and since then he has been a little chary in using a general anesthetic for these operations.

Indications for the Submucous Resection of the Nasal Septum
Dr. ROBERT LEVY, Denver, said that a condition which is very commonly responsible for difficult nasal respiration, reflex disturbances or naso-pharyngeal discharge, is the presence of exostoses and enchondroses from the septum. These are nearly always associated with more or less deflection, and it is frequently difficult to determine whether a large spur or ledge alone is sufficient to produce the symptoms, or whether the deflection is sufficient to materially increase the difficulty. In deciding on the treatment and the character of the operation, one must not only determine the nature of the difficulty to be overcome, but must also consider the effect on the patient. Operations should be chosen all things being equal, with a view to simplicity, the shorter the operation, the less shock and discomfort to the patient.

The window resection presents the ideal method for the correction of certain deformities of the septum. It has none of the elements of mutilation that other operations have, nor is it the simple incision of a structure which so frequently characterizes rhinological operations. A contraindication to all operations on the nasal septum is the existence of syphilis, either hereditary or acquired. He does not wish to detract from the importance and immense value that the submucous resection of the nasal septum offers. It is the most ideal operation for deflected septum. It is, however, an operation requiring a decided perfection of manual dexterity and perfect technique, it also requires more endurance and consequently produces more shock, therefore, before deciding on its performance the symptoms should be weighed carefully and judgment exercised, so that it can not be charged against rhinologists that they operate because of some simple anatomic abnormality rather than because of definite disturbing symptoms.

Evils of Mouth Breathing

Dr. C. P. INGHART, Columbus, Ohio, said that in trying to find the origin of many cases of chronic pharyngitis his suspicions were attracted to mouth breathing as one of the common causes of this complaint. It is only in later childhood, subsequent to hypertrophy of the adenoid tissue in the vault of the pharynx and hypertrophy of the tonsils that children begin to breathe through the mouth. Children are often housed in overheated and ill-ventilated rooms and coddled in heavier wraps than are necessary for their health. These sudden changes that they undergo in passing from warm rooms into the winter air. One of the probable evils of mouth breathing in early life is the raising of the palatine arch by undue pressure from the inhalation of air through the mouth.

This excessive arching of the hard palate, which is also the floor of the nose, encroaches on the space in the nose. During development the septum naturally grows so as to fill the space allotted to it in the nose. That space is consequently narrowed in its perpendicular diameter, and it naturally follows that the septum will bend to one side or the other. When a person has a high arched palate one may expect either to find a deflected septum in the shape of a large curve, or a sharp kink or spur. The latter is nearly always seen along the line where the vomer joins the perpendicular plate of the ethmoid. There is no doubt that mouth breathing, with its consequent high arching of the palate, is responsible for the peculiar shaping of the face seen in many children suffering from adenoids. It is also a factor in causing the protruding and misshapen teeth of the upper jaw.

Any obstructions should be removed by surgical means and the patient encouraged to breathe through the nose. Even later in life, when the bones of the mouth and nose are completely ossified, the openings of the nares can be enlarged by proper breathing exercises. The following axioms are recommended for keeping the nose in a normal condition. Cool living rooms, well ventilated sleeping rooms, cold bath, especially for the neck and spine, dry clothing, simple foods, regular habits, moderate daily exercise, and always breathe through the nose.

Treatment of Hypertrophic and Intumescent Rhinitis

Drs. E. FLETCHER INGALLS and STANTON A. FRIEDBERG, Chicago, drew the following conclusions: 1. The galvano cautery, when properly used, offers one of the best, if not the best, methods for the treatment of the intumescent and hypertrophic forms of rhinitis. 2. The dangers of middle ear infection have been greatly exaggerated, not any case in the series, and only one among several thousand cauterizations, having come under their observation. 3. The liability to adhesion formation is not great, providing sufficient care is taken not to injure the opposite septal mucous membrane, and providing in cases in which the subsequent swelling is marked a probe be passed between the opposing surfaces in four or five days. 4. A 4 per cent solution of cocaine, according to the formula published, is sufficient in the vast majority of cases to induce complete local anesthesia, three to six applications on a cotton wound flat applicator being sufficient for this purpose. As a result of experience, especially in cases of marked intumescence, they believe that a spray of adrenalin or suprarenalin, grain $\frac{1}{8}$ to the ounce, materially assists in producing anesthesia. 5. The objection that the galvano cautery destroys too much of the mucous membrane does not obtain, if the cautery does not occur any oftener following cauterization than after mucous membrane is destroyed. 6. Scab and crust formation is linear, and in some of these a change in the spray solution prevented hemorrhage, and this factor makes the discomfort following the operation very much less than after some other methods. 7. There is very little pain after galvano-cauterization of the turbinated bodies. 8. Instruments were exhibited and cases presented by Drs. Frank Allport, Joseph C. Beck, William L. Ballenger and Norval H. Pierce, Chicago; H. W. Loeb and Max A. Goldstein, St. Louis; W. R. Dabney, Marietta, Ohio, and John J. Kyle, Indianapolis.

CALIFORNIA ACADEMY OF MEDICINE Regular Meeting held Jan 20, 1906

The President, Dr. P. K. Brown, in the Chair
Atheroma of the Aorta.

Dr. WILLIAM ORNTLIEB showed specimens of atheromatous aorta which had been injected at blood pressure with paraffin. Contrary to Thoma's contention, these showed no bulging of the muscle beneath the atheromatous plaques. Since they were taken from an early stage in the disease, they showed very clearly that the thickening of the intima is not caused by any

alcoholic cases and in those cases in which nutrition is rapidly failing Eight ounces of a normal saline solution may be introduced into the bowel through a funnel attached to the end of a catheter These injections may be repeated once in four hours If the amount of fluid is limited to 8 ounces it is retained, with marked beneficial results Loomis, therefore, emphasizes the following important points in the treatment of pneumonia First, the more general use of morphin hypodermically in the early stages of the invasion of pneumonia, which is the stage in which very many cases present shock to the nervous system from a sudden increased toxemia associated with marked pain almost reaching the pain of pleurisy [While Dr Loomis advises the general use of morphin, it should be remembered that this drug locks up the secretion and should be used with great caution—Ep] Second, the amount of alcohol used in the treatment of pneumonia should be very judiciously and cautiously used Third, the avoidance of promiscuous drugging of patients, which produces more damage than assistance in a greater percentage of cases

Bronchial Asthma.

In the treatment of bronchial asthma, J P Oliver, in the *New York Medical Journal*, states that the successful treatment consists first, in treatment during the paroxysms, second, in treatment during the intervals, third, in proper attention to sanitation and diet In the treatment of the paroxysms Oliver recommends morphin sulphate hypodermically in doses of from $\frac{1}{8}$ to $\frac{1}{4}$ grain combined with atropin sulphate in doses of from 1/160 to 1/100 grain, repeated, if necessary, in two or three hours [In this condition also morphin must be used with care, as there is danger of creating a habit—Ep] If the patient is a neurasthenic, he recommends apomorphin hydrochlorid in doses of from 1/20 to 1/10 grain, and strychnin nitrate, in doses of from 1/60 to 1/40 grain, the latter preparation being used to prevent depression from the effects of the apomorphin The constitutional treatment consists of the following combination

R Potassu iodidi	3ii vi 8 24	
Hvdargvri chloridi corrosivi	gr ss	03
Ammonii chloridi	gr x	65
Liquoris potassu arsenitis	3ss	2
Aque dest, q s ad to make:	3iii 90	

M Sig From one teaspoonful to a desertspoonful in a half a glass of water three or four times a day, beginning with the smaller dose, and gradually increasing to the larger dose

He advises against the use of tobacco in all forms, especially cigarettes Alcohol should not be used in any form, as it not infrequently tends to provoke severe attacks The nasal passages and the mouth and throat must be kept in an aseptic condition The teeth must be carefully cleansed, and if caries are present, they should be properly attended to by the dentist Flannel should be worn next to the body during the winter and early spring The sleeping apartment should be well ventilated, especially at night, as the paroxysms not infrequently occur between 2 and 4 o'clock in the morning, consequently all draughts of air should be avoided Feather beds and pillows for sleeping should not be used Overeating and late dinners should not be indulged in F L Nelson, in the same periodical recommends hyoscin hydrobromid given hypodermically in doses of 1/150 grain each, and also adrenalin in doses of from 4 to 8 minims of a 1 to 1,000 solution, hypodermically

In the internal treatment he recommends hot black coffee, belladonna when innervation is disordered, or when there is spasm of the muscular fibers of the bronchi Chloral hydrate is of service in some cases, given in large doses, but should be used with care

In the treatment of the nose in severe cases he recommends a spray of a 4 per cent solution of cocain in order to rid the passages of the secretions The administration of this preparation however should be carefully guarded by the physician himself If the patient is weak he should be given iron, quinin, cod liver oil phosphorous and nut vomica as indicated To relieve the distressing cough Nelson recommends lobelia and ammonium chlorid

The patient should be instructed to live in the open air, avoiding winds and locations where there are extreme varia-

tions of temperature Humid atmosphere is bad The under wear should be of woolen The functions of the skin and the other excretory organs should be carefully watched, moderate physical exercise is recommended, and the patient is advised to avoid indigestible and fermenting foods, which are liable to result in the formation of gas, in constipation and chemical irritation Fats and sweets should be limited, starchy foods must be thoroughly cooked and slowly masticated Among those articles of food which should be avoided are pork, veal, cheese, malt liquors, heavy wines and champagne The heavy meal should be taken in the middle of the day, the supper should be light in order that gastric digestion may be completed before the patient retires Water should not be allowed with the meals

Cold Fresh-Air Treatment of Pneumonia.

W P Northrup, in the *Boston Medical and Surgical Journal*, relates a case of a wandering grip pneumonia involving the entire left side, which was combated by what he calls the cold fresh air treatment In this case he placed the head of the bed between two open sashes in a bay window The sashes were lowered and left widely open As this was in March the room temperature was 40 F The nurses were compelled to wear heavy wraps night and day The patient had no oilskin jacket and no cover over the chest, and the arms were left out The boy's respirations ranged from 35 to 40, and the temperature reached from 104 to 105 during the day, the pulse was seldom above 120 Going on the theory that the boy was overheated and prostrated with poison, Northrup adopted this means of treatment The fresh air moved the hair on the patient's forehead, passing in at one window and out at the other Muttering delirium, hot dry skin and a dry tongue were the indications for plenty of water and air, consequently the author adopted this method to cool and dilute the blood stream, to aid the system in unloading its toxic material, and to increase the natural drain He mentions the fact that patients can not catch cold while the fever is present, and states that with this treatment they are more comfortable, bear the disease better, and recover earlier and more perfectly, and with less danger

Quillaja as an Emulsifying Agent

According to L F Hemmans, in *British Medical Journal*, the value of quillaja as an emulsifying agent is not sufficiently known The following emulsions are easily prepared and, according to this author, remain permanent on the addition of either alkalis or acids

To make a chloroform solution

R Chloroformi	5ix	36
Tinct quillajæ	3iii	12
Aque	5x	130

M. Ft emulsio

Aqua menthæ piperitæ		
R Olei menth pip	3iv	16
Tinct quillajæ	3ii	8
Aque	5x	130

Aqua camphoræ conc

R Pulv camphoræ	3i	4
Spiritus rectif	3iii	12
Dissolve and add		
Tinct quillajæ	3ss	6
Aque	3iii	90

Emulsio ol. santali

R Olei santali	3i	4
Tinct quillajæ	3ss	2
Aque	3i	30

Emulsio olei terebinthinæ

R Olei terebinthinæ		
Tinct quillajæ, ñi	m xx	130
Aque	3i	30

Emulsio paraldehyd

R Paraldehyd	3i	4
Tinct quillajæ	m xx	130
Aque	3i	30

Cure of Eczema by Bier's Hyperemia

Dr George Richter St Louis, in the *St Louis Medical Review* February 24 reports the cure of a case of eczema by

Medicolegal

Care Required of Surgeon Volunteering Services

The Supreme Court of the United States says in the case of the Guardian Trust and Deposit Company vs Fisher, that an individual may be under no obligation to do a particular thing, and his failure to act creates no liability, but if he voluntarily attempts to act and do the particular thing, he comes under an implied obligation in respect to the manner in which he does it. A surgeon, for instance, may be under no obligation in the absence of contract, to assume the treatment of an injured person, but if he does undertake such treatment he assumes likewise the duty of reasonable care in such treatment.

Board of Health Diagnosis Conclusive

The Court of Appeals of Kentucky holds, in the case of the City of Bardstown vs Nelson County, an action brought to recover the expenses of a quarantine against smallpox, that the jury should have been instructed that the action of the board of health in diagnosing the case of a person sick and declaring him ill of smallpox, and in directing the quarantine to be established by the city, was conclusive as to it and the fiscal court of the county, and should be so regarded by the jury in arriving at a verdict. Furthermore, the court holds that the trial court should have sustained an objection to and a motion to exclude the testimony of certain witnesses that the man did not have the smallpox, when the witnesses were not and did not claim to be experts and were not familiar with the disease or experienced in its treatment. The prejudicial effect of this testimony, the court says, was not lessened by an admonition to the jury that it might be considered by them in determining the reasonableness of the city's charges for the articles furnished and services rendered by it in preventing the spread of the smallpox. The court is unable to see that this testimony was any more competent for the purpose the jury were told to consider it than it would have been on the question of whether or not the man had the smallpox.

CONSTRUCTION OF HEALTH POLICY

The Supreme Court of North Carolina says, in the case of Jones vs Pennsylvania Casualty Company, that the plaintiff, a holder of a health policy, received a small scratch on the hand, which began to inflame, blood poisoning developed and the arm was of necessity amputated. The policy contained a definite stipulation for indemnity in case of disability arising from certain specified diseases, blood poisoning being one expressly named. But, having given this assurance of indemnity, from which, this disease being evidently the direct and controlling cause of the disability, as a matter of first impression the right of the plaintiff to recover would seem to be clear, the policy then took up the matter of provisos by way of restriction, and stipulated further: 1 That the policy should not apply to any illness or disease whatever except those named. 2 That it should not apply to any disease which was complicated with, or resulted from, any disease not therein named, etc. 3 Nor to any disease or illness which resulted from injury, etc. 4 Nor in effect, to any disease which developed or resulted from those diseases that were named, etc. There were many other limitations and restrictions in the policy, but those set out were enough to show that, if these provisos could prevail, blood poisoning was entirely withdrawn from the operation of the policy, and any and all stipulation for indemnity concerning it effectually removed. Now, so far as the court is informed, blood poisoning is not considered as one of the primary or idiopathic diseases. It is a toxic condition of the blood, caused either from or through a surface wound or some internal lesion or from the breaking down of tissue incident to an existent or precedent disease, and thereby producing suppuration. As to this disease, therefore, these provisos removed every possible condition where the disease could occur, and if upheld would, as stated, entirely set aside the definite contract for indemnity contained in a former clause of the policy. Such a result could not be permitted and is not sustained by authority. It is established doctrine in construing these policies that doubts shall be resolved in favor of the insured. Another principle applicable

to this case, and equally well established, is that, while clauses in a contract apparently repugnant must be reconciled if it can be done by any reasonable construction, yet a proviso which is utterly repugnant to the body of the contract and irreconcilable with it will be rejected, likewise, a subsequent clause irreconcilable with a former clause and repugnant to the general purpose and intent of the contract will be set aside. The court's conclusion, therefore, is that, as to blood poisoning, the various restrictive provisos in this policy were entirely repugnant to the definite stipulation of indemnity contained in the main body of the contract, where contrary to the general intent and purpose of the policy and could not avail to defeat the plaintiff's recovery of indemnity.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Medical Record, New York.

March 3

- 1 *Epidemic Cerebrospinal Meningitis W M Leszynsky New York
- 2 *The Heart in Tuberculosis W Hutchinson Redlands Cal.
- 3 Massage and Motion in Fractures G Norström New York
- 4 Syphilitic Empyema of the Accessory Sinuses of the Nose J H Abraham New York
- 5 Splenic Leukemia H J Thompson, La Porte, Ind.
- 6 *Aspiration of the Tympanic Cavity After Paracentesis a Valuable Aid in the Treatment of Acute Otitis Media P Fridenberg New York

1 Epidemic Cerebrospinal Meningitis—Leszynsky presents a clinical report and an analysis of the special symptoms in 30 cases representing nearly all types of the disease. The mortality was 50 per cent. Good nursing and proper feeding were the most important features in the treatment. When the weather permitted, the patient was kept in the open air the greater part of the day. Hot saline rectal irrigation or hypodermoclysis often proved extremely valuable in improving the patient's vitality. The hot bath, given several times a day, usually allayed excessive irritability and delirium, and temporarily improved the patient's general condition. The ice bag was applied to the head and neck in every case, but Leszynsky doubts its utility. Whisky, strychnin, digitalis, morphin and ergot were employed when indicated. In several acute cases salicilate of sodium was administered by rectum, but without benefit. Lumbar puncture was performed one or more times in every case, either for diagnostic or therapeutic purposes. It was never followed by unpleasant results. In two of the patients who recovered, lysol solution was injected into the spinal canal. In one instance a 1 per cent solution was used without apparent effect. In the other a 10 per cent solution was used, and it seemed to have some influence in hastening recovery. It was also used in several of the fatal cases without benefit.

2. Heart in Tuberculosis—Hutchinson has found, after careful investigation that a weak, undersized, muscular deficient heart indicated by a weak, rapid pulse and defective first sound, approaching embrococardia, is one of the most constant and significant conditions present in consumption. This condition in a considerable percentage of cases, precedes the development of tuberculosis. The earlier in the disease this condition presents itself and the more striking its degree, the more serious the prognosis. This undersized and inadequate heart is normal at about the period of puberty. Hutchinson urges that the condition of the heart should be the principal guide in the diagnosis, prognosis and treatment of consumption. A persistent rapid pulse without other ascertainable cause, should always arouse suspicions of incipient tuberculosis.

the glass bulb is pressed against the external meatus, plugging the canal hermetically. Suction is then applied and gradually increased until there is a flow of fluid from the middle ear and the glass bulb fills more or less. Fridenberg has found the effects of this aspiration strikingly gratifying. There seems to be less pain after the paracentesis than when an incision only is made. The otitic pain is more promptly and lastingly relieved. A second incision of the drum is less often required and drainage is much more free.

American Medicine, Philadelphia.

March 3

- 7 *The Public Health Laboratory F F Westbrook, Minneapolis Minn
- 8 *Cause of Epilepsy O Lerch New Orleans La.
- 9 *Chronic Urethritis and an Improved Method of Applying Medication to the Urethra. D G Ballenger Atlanta Ga
- 10 Practical Side of Mosquito Extirmination H C Weeks Bay side, L. I.
- 11 Effect of Posture on Cardiac and Vascular Murmurs R D Rudolf Toronto Canada
- 12 Disinfection of Ships J D Long Manila, P I

7 Public Health Laboratory—Westbrook discusses the function and scope of the public health laboratory, and takes occasion to group laboratory work and laboratory workers in the classes in which the present demands and growth seem to place them.

8 Cause of Epilepsy—Lerch advances the theory that the basis of epilepsy is a diseased brain, congenital or acquired. The widely accepted theory of autointoxication he considers, with the rest of etiologic factors, as a remote cause producing congestion and edema. He thinks that the large number of patients in whom a neuropathic constitution and epilepsy can be traced directly, and the large variety of lesions that are found in the epileptic brain favor the correctness of his theory. He says that the same train of symptoms, occurring under the most varied conditions, in patients of all ages, uninfluenced by sex, climate and disease, calls for one direct cause to produce the attack. This cause is congestion and edema.

9 Treatment of Chronic Urethritis—Ballenger's method consists in the employment of a sound which has been coated with the solidified ointment of Unna, which contains, in addition to silver nitrate and cocoa butter, balsam of Peru and white wax, to harden the ointment after it has been smeared on the sound. To facilitate the hardening of the ointment, the sound is cooled in ice water. This method of treatment has proved so satisfactory that Ballenger has adopted it as a routine method of applying medicine to the urethral canal in any chronic condition.

The sounds are prepared in the following manner. From 2 to 3 gm (30 to 45 gr) of silver nitrate or the medicament desired, is powdered and mixed with 180 gm (5vi) of melted cocoa butter, which is placed in a tall wide mouth bottle. It should be sterilized occasionally by boiling in a water bath. When the mixture is to be used it is placed in hot water or on a steam radiator until it liquefies. The largest sound that can be passed easily and another three sizes smaller are sterilized and placed in a pitcher of ice water. The large sound is lubricated introduced, and left in place for from three to eight minutes, according to the conditions. The smaller one is dipped into the melted ointment, withdrawn and manipulated for a moment while it cools to obtain a uniform layer, and is then placed in the ice water. The cold hardens the cocoa butter and the sound may be introduced before this melts, while the canal is cool from the larger sound which is passed first, to prepare the way by overcoming any spasmodic obstruction, and to dilate the stricture, if one exists. The stimulating action of the cold is also desirable. The canal may be irrigated before each treatment. Massage along the urethra can be done painlessly by steadying the sound with the right hand to furnish counter pressure against the fingers of the left, which devote special attention to the bulb and indurated points. Force of any kind should never be used, nor is the treatment applicable to any acute condition. The intervals between treatments vary from one to four days, according to the reaction which follows and the condition being treated. The strength of the ointment is increased as the urethra becomes more tolerant.

the diseases are usually a metamercurial condition. He does not deny that paretics and tabetics are syphilitic, but believes that it is equally true that they have been mercurialized. As the result of considerable study he inclines to the belief that mercury and not syphilis is responsible in the etiology of dementia paralytica and locomotor ataxia. He says that there are important reasons for the belief that syphilis plays a minor rôle in the etiology of sclerosis of the brain and cord. Although the negro is very prone to contract syphilis, paresis and posterior spinal sclerosis are seen rarely in the colored race. The average negro most frequently receives no treatment for lues, and the most severe secondary and tertiary lesions are found in the colored man. Having become a syphilitic, he allows the disease to run a typical course without interference. If he does take mercury it is with no system, it is taken irregularly and for no prolonged period of time. Yet, in spite of all this, he does not become the victim of paresis and tabes. On the other hand, the man of brains, the professional man, the highly educated man, falls a ready victim to paresis. The requisites of thorough anti-syphilitic treatment are brains and money, and, since these are the essentials in obtaining the treatment, Wolter believes that there is the reason why paretics and tabetics are usually individuals of prominence. Wolter also discusses the reasons why paresis takes a long time to develop, how mercury may produce the pathologic changes found in paresis and tabes, and the fact that anti-syphilitic treatment does no good, but actually does harm, pointing out always that the syphilitic etiology of the diseases under discussion appears questionable.

Journal of the Medical Society of New Jersey, Newark.

February

- 36 *Considerations Regarding Prescription Writing To-day F. M. Corwin, Bayonne, N. J.
- 37 Obstetric Technic in Relation to Subsequent Pelvic Manifestations. J. C. Applegate, Philadelphia.
- 38 Examination of the Eyes and Ears of School Children by School Teachers L. Emerson, Orange, N. J.

36 Prescription Writing To-day.—Corwin discusses the reasons for the decadence of the old time prescription and the ascendancy of the prescription calling for proprietaries and "patent medicines." He says that a peep at the shelves and into the closets behind the prescription counters of drug stores reveals a vast array of broken original packages of the wares of the different manufacturing pharmacists, of more or less repute, who have managed, by dint of persistent pushing of literature and samples, to get their preparations prescribed by physicians. Many of these proprietary articles are ethical and many are not. Of those which might in themselves be classed as ethical, some are exploited in a manner which puts them without the class, and makes their use by the medical profession entirely inadvisable.

One of the first and most apparent reasons why physicians prescribe any of these remedies, says Corwin, is that the manufacturing pharmacist can and does turn out a better article than the average retail pharmacist. The combination and concentration of capital, the possession of special apparatus, the employment of skillful chemists, the laboratory facilities for research and experiment, the procuring and handling of crude materials in large quantities, enable the manufacturer of these proprietary articles to turn out a product which shall be as pleasing as possible to the eye, nose and palate. Furthermore, it takes a number of years for a really meritorious formula to find its way into the United States Pharmacopeia, or in other words, to become official. The result is that until a given preparation has been put in the Pharmacopeia the latter published and in the hands of pharmacists, the mixture obtained in twenty different stores may have been made from almost as many different formulas. Even if each store is provided with the same formula, the conditions behind the prescription counter will readily explain why the products differ. Corwin places much of the blame for the undesirable preponderance and unmistakable attractiveness of these factory made products on the Pharmacopeia.

Speaking of the objections to prescribing these proprietary articles Corwin says that the effect on the mind and resourcefulness of the prescriber is detrimental narrowing, blunting and destructive of individuality, of the ability to adapt a

prescription to the special case before him. The result is that prescription writing is liable to become a lost art. He points out that not only is it the duty of the physician to shun these offending articles, but to do all he can to discourage their use. As soon as one of the monopolized chemicals, under the coined name, becomes recognizable and is put in the market under its chemical cognomen, physicians should take pains to familiarize themselves with the fact, and to make use of the preparation. The use of but one word, and that a coined word, for the name of a remedy is objectionable in that it readily catches the eye, and is in turn learned by patients. The consequences to the latter are likely to be disastrous because, if the remedy works well, especially for the relief of some frequently recurring condition, such as headache, the patient falls a ready prey to the drug.

University of Pennsylvania Medical Bulletin, Philadelphia

January

- 39 *Has Experience Sustained the More Radical Operations for Cancer of the Uterus? J. G. Clark, Philadelphia.
- 40 Complications Arising in Sixty-three Consecutive Cases of Ovarian Tumors with Special Reference to Malignancy C. C. Norris, Philadelphia.
- 41 Sketch of the Life of Thomas Bond, Clinician and Surgeon J. A. Scott, Philadelphia.

39 Radical Operation for Cancer of Uterus.—Clark states that while the operative statistics up to this time must dampen the enthusiasm of even the most ardent optimist, on the other hand, they are sufficiently encouraging to cheer even the pessimist if he will only give the study of ultimate results an unprejudiced critical review. He believes that more is lost than is gained in the radical operation when the glands are painstakingly extirpated, and that to remove here and there a palpably large gland will certainly not promote the patient's interest so far as a radical cure is concerned. Of all the various methods of operating employed he still adheres to the abdominal one, removing all possible tissue in the vicinity of the primary site of the growth, and using the cautery rather than the knife. In general, he follows the principles laid down by Wertheim, stopping short, however, with the removal of a considerable cuff of vagina with the uterus, and as much parametrium as possible, not prolonging the operation by a search for glands. He says that when one takes into consideration the fact that there is no regularity of metastatic distribution that in even the earliest cases metastasis may have occurred, and that when the lower accessible glands are involved, the upper inaccessible glands, with the exception of only 13 per cent, are also involved, little argument is left in favor of the extensive dissection of the glands with the largely added mortality that must necessarily follow this step, from shock, infection and other complications.

American Journal of the Medical Sciences, Philadelphia

February

- 42 *Extirpation of the Mosquito A. H. Doty, New York.
- 43 Cystinuria W. McK. Marriott and C. G. L. Wolf, New York.
- 44 *Present Status of Blood Cryoscopy in Determining Functional Activity of the Kidneys E. Beer, New York.
- 45 Case of Hypermephroma W. J. Taylor, Philadelphia.
- 46 Case of Double Pyonephrosis M. Krotoszyner, San Francisco, Cal.
- 47 Abscess of the Brain H. F. Stoll, Hartford, Conn.
- 48 Primary Cavernous Sinus Thrombosis. W. Zentmayer and T. H. Welsburg, Philadelphia.
- 49 *Case of Myxedema with Ascites. A. E. Hertzler, Kansas City, Mo.
- 50 Spinal Cord Degenerations in a Case of Acromegaly, with Tumor of the Pituitary Region. A. M. Barrett.
- 51 Operations for Relief of Pelvic Diseases of Insane Women L. Brown, New York.
- 52 *Researches on the Blood of Epileptics B. Onuf and H. Lorrusso, Sonoma, N. Y.
- 53 *Gunshot Wounds of the Abdomen G. T. Vaughan, Washington, D. C.
- 54 *Complete Amputation of the Thigh with Replantation A. Carrel and C. C. Guthrie, Chicago.
- 55 Tetanus C. P. Howard, Baltimore.

42—This interesting article covers practically the same points as the article by Dr. Doty which appeared in THE JOURNAL, Aug. 26, 1905, page 585.

44 Status of Blood Cryoscopy in Determining Functional Activity of Kidneys.—Experiments have convinced Beer that cryoscopy of the blood gives but little absolutely accurate information as to the present activity of the kidneys. The kidneys, though the most important organs in regulating the molecular concentration and osmotic pressure of the blood, are

not the only organs concerned with this intricate process. An anatomically normal or almost normal kidney may be so disturbed in its functional activity as to appear seriously diseased or at least temporarily incapable of excreting its quota of molecules. The concentration of the blood may be normal, equal —56 C, even though the kidneys are functionally inactive and anatomically very badly diseased. The concentration of the blood may be increased to —60 C or higher even though the second kidney is anatomically normal but is suffering from a functional disturbance produced by nervous reflexes or by toxins which come to it through the circulation from the other diseased kidney. The concentration of the blood may be markedly increased, even though both kidneys are in good condition.

In bilateral disease if nephrectomy is done with normal concentration the operator may remove in the diseased organ the majority of the functioning tissue of the kidneys and thus bring on uremia and death, because the renal tissue left in the patient is inadequate for the excretory work. The list of patients who have survived a nephrectomy, despite high molecular concentration, —60 C, is steadily growing. Patients with normal freezing point do not necessarily survive the operation and are not in any way insured against subsequent uremia. In a large number of cases high concentration corresponds to bilateral kidney tissue, but as yet it is impossible to decide which cases of high concentration are not of renal origin and vice versa which patients with low concentration are suffering or likely to suffer from renal insufficiency.

50 Myxedema with Ascites.—The interesting points in the case reported by Hertler were the presence of ascites and of leukoplakic spots on the backs of the hands.

52 Blood of Epileptics.—Onuf and Lograsso undertook the study of the formed elements of the blood with the purpose in view of determining whether there existed any connection between the behavior of the formed elements and the epileptic seizures. Nineteen cases were selected, 8 men and 11 women, all of whom had been without bromids for a period of at least two months preceding the examination and all of whom were idiopathic cases, so far as could be determined. They found that a leucocytosis may already be present directly before a seizure, and, if so, is then not a purely secondary phenomenon produced by the seizure. Furthermore, a grand mal seizure need not necessarily be preceded or ushered in by a leucocytosis. These observations teach the important fact that there is no absolute parallelism between seizure and leucocytosis. They also show that the leucocytosis is, in part at least, independent of the seizure.

53 Gunshot Wounds of Abdomen.—In Vaughan's series of 14 cases of gunshot wounds of the abdomen there were 8 cases of wounds of the small intestine, 6 of the large intestine (5 of the colon and 1 of the rectum), 5 of the diaphragm and pleura, 5 of the liver, 2 of the stomach, and 2 of the kidneys. Several patients had a number of wounds in one organ, while in others several organs were wounded. One patient had 11 bullet holes in the intestine, while another had perforation of the liver, stomach and colon. One of the patients was not operated on, 1 was operated on late, and 12 were operated on in from one to twenty eight hours after the reception of the injury. Nine patients died, a mortality of 64 per cent. In 6 cases the cause of death was hemorrhage, in 1 case peritonitis, in 1 case exhaustion, and in 1 case shock or the anesthetic, or both. Vaughan says that he knows of nothing more which could have been done to save the 6 patients who died from hemorrhage, except to have operated sooner.

54 Amputation of Thigh with Replantation.—Carrel and Guthrie attempt to show that a permanently successful replantation of an amputated thigh is possible. The experiment was performed on a dog. The thigh was amputated at the union of its lower and middle thirds. The limb was removed and enveloped with sterilized moist compresses. After a few minutes the amputated portion of the limb was placed on the operating table close to the remaining stump of the thigh. The continuity of the artery and of the vein were immediately re-established by end-to-end suturing. Absolutely no blood escaped from the vessels at the lines of anastomoses. The

pulsations of the popliteal artery immediately became normal and the femoral vein filled with circulating dark blood. The two ends of the bone were closely approximated and sutured together with silver wire. The sciatic nerve was sutured with silk, and the muscles, aponeurosis and skin with catgut. A gauze and collodion dressing was applied. Afterward the lower portion of the abdomen, the hip, the thigh and the leg were enveloped with cotton and the large plaster-of-Paris bandage.

Twenty-four hours after the operation the animal was in good condition and the replanted foot was very much warmer than the other foot. There was considerable swelling, however, which was thought to be due to the inactivity of the vasomotor nerves. Fifty hours after the operation the dog was killed, the development of gangrene being inevitable. The failure of the operation was due only to a fault of technique. A circular constriction produced by the gauze collodion dressing had stopped the venous circulation. The thigh and the leg were dissected. There was no stenosis of the vessels. The anastomoses were perfect. The cut ends of the muscles had united satisfactorily. The connective tissue of the thigh and of the popliteal region seemed normal, while in the leg and foot below the ring of constriction it was markedly infiltrated and edematous. The veins of the foot and leg were extremely dilated and filled with coagulated blood.

Indiana Medical Journal, Indianapolis February

- 56 Camp Morton During the Civil War P H Jameson, Indianapolis
- 57 The Regimental Surgeon L D Waterman, Indianapolis
- 58 Eyesight, Literature and Civilization F C Heath, Indianapolis
- 59 *New and Rational Operation for the Correction of Prominent Ear I T McShane, Indianapolis
- 60 Medical Treatment of Postoperative Peritoneal Adhesions T B Eastman, Indianapolis
- 61 The X Ray in the Treatment of Certain Diseases of the Skin F Wise, New York

60 Operation for Correction of Prominent Ear.—The ears of the young man whose case is reported by McShane extended at right angles from the head and measured at the distal margin one inch and three quarters. An elliptical section of integument two inches in length and something more than a half-inch in width was removed from the posterior aspect of the ear. The connective tissue was then carefully dissected away and the perichondrium roughened by the use of a curette. Strong catgut sutures were used in the cartilage in such a manner as to fold it on itself. The needle was introduced into the cartilage near the margin of the denuded section and thrust in as deeply as possible, care being taken not to pierce the skin on the anterior surface of the ear. The needle was returned and brought out an inch and a half from the point of insertion. The needle was then carried across the denuded area and a similar hold was taken near the margin of the skin on the opposite side. Four or five of these sutures were introduced, and when they were tied the ear presented the normal anterior ridge in its proper position, the ear was contracted to the normal size and at the same time brought back to the proper distance from the head. Silk sutures were used in bringing the margins of skin together, and the catgut sutures were thus buried. The ears were dressed with antiseptic gauze and cotton compresses and bandaged close to the head so as to relieve the sutures of as much tension as possible. Two weeks later all dressings were removed. The ears are normal in appearance and size.

Medical Fortnightly, St. Louis February 10

- 62 *Foudroyant Gangrene W H Wilder Birmingham, Ala
- 63 Tuberculosis Socially and Financially C A Boice, Washington, Ia
- 64 Present Status of the Alkaloidal Movement W C Abbott Chicago
- 65 Tuberculous Adenitis of the Neck R J Christie, Jr Quincy Ill
- 66 Chronic Nephritis in the Aged J P Matthews, Carlinville

62 Foudroyant Gangrene.—Two cases of this kind are reported by Wilder. The first patient dropped a pistol from his pocket, and the fall caused the weapon to explode, the ball entering the fleshy part of the calf of the right leg on the inner side, four inches below the knee, passing through the

limb behind the bones which were not injured, and coming out two inches higher on the outer surface. The patient, not believing that his injuries were dangerous, continued to work for two days before seeking medical attention. When first seen the wounds looked healthy, the circulation was good, there was little swelling, but much pain. The leg was dressed antiseptically. The following morning there was more swelling. Hot applications were applied and changed frequently for twenty-four hours, at the end of which time the pain had increased. The pulse was 120, temperature 102 F, and marked gangrene had made its appearance. The thigh was amputated rapidly at the junction of the middle and upper third, but the patient died six hours after the operation, just four days after the injury.

The second patient sustained a compound fracture of the left radius near the wrist. On the fifth day following the injury evidences of sepsis set in about the hand, which was freely incised and dressed in hot bichlorid gauze. During the next twenty-four hours the pulse ran up to 116, and the temperature to 104 F. The skin on the arm began to show a dusky brown color which spread rapidly toward the shoulder, crepitation in the cellular tissues could be felt, and gangrene was evident. Amputation was advised, but was not consented to until four hours later, when the arm was amputated near the shoulder. The stump was left wide open and dressed with hot bichlorid gauze for ten days. After a long and stormy convalescence the patient made a good recovery.

American Journal of Obstetrics, New York
February

- 07 Toxemia of Pregnancy I Strauss, Ithaca, N. Y.
- 08 *Surgical Treatment of Retrodisplacements of the Uterus. J. W. Borée, Washington, D. C.
- 09 *One Hundred Consecutive Abdominal Sections, Without a Death. W. J. S. McKay Sydney Australia.
- 70 *Fibroma Molluscum Gravidarum, New Clinical Entity. S. M. Brickner, New York.
- 71 The Dermatoses of Pregnancy. S. Pollitzer, New York.
- 72 *Abdominal Pregnancy, Persisting Beyond the Normal Period of Gestation. C. A. L. Reed Cincinnati.
- 73 *Further Consideration of Mesenteric Cysts. O. G. Pfaff, Indianapolis.
- 74 Treatment of Face Presentations. A. P. Clarke, Cambridge Mass.
- 75 Treatment of Puerperal Eclampsia. E. G. Zinke, Cincinnati.
- 76 Intermittent Hydrosalpinx. F. Flindler, Chicago.
- 77 Pus Collections in the Female Pelvis. H. Grad, New York.
- 78 Case of Melena Neonatorum. A. F. Blount and S. M. Gardner, Chicago.

68 Retrodisplacements of Uterus.—Borée insists on the utmost importance of being absolutely familiar with the conditions, pathologic and anatomic, in each individual case. Inasmuch as no one surgical operation is applicable to every case the surgeon who excludes from his curriculum some of the procedures that are based on principles that do not violate laws of function and pathology, and sees no necessity for anything but shortening round ligaments or ventrosuspension, or what not will necessarily fail from misapplication. Many cases will need no operation on the uterus for the displacement *per se* but many times diseased and adherent appendages will demand appropriate treatment. This may be, indeed in a large proportion of cases will be, ablation. The careful observer will find that this procedure, properly executed, has remedied the displacement. Borée warns the pelvic surgeon against the improper application of ligatures in removal of the appendages to wit placing them so as to shorten the posterior surface of the broad ligament or to approximate the distance between the uterine cornua and the sacral promontory.

He suggests that a uterine body very jagged and bleeding on its posterior aspect after separation of adhesions, as a rule, should be removed if the appendages are sacrificed. Future trouble from new adhesions with the subsequent retroversion, endometritis, etc. is so frequently experienced that it may be confidently expected when this rule is violated. When tumors are plainly the cause of retrodisplacement and are removed, due care should be taken to learn whether or not this operation does not entirely remedy the condition. Usually it will do so and in such an event nothing further should be done. A floating spleen should be removed a stomach that mechanically acts as an etiologic factor should receive appropriate treatment as should a lacerated cervix, endometritis, injuries

to the pelvic fascia, subinvolution and cervical hypertrophy in any diameter. The sound principles to employ as guides are, principally, address study and treatment to the existing abnormalities, whether of a congenital or an acquired variety, and to regard the displacement as of secondary importance.

60 Prophylaxis in Abdominal Sections.—McKay emphasizes the importance of prophylactic measures in cases of abdominal sections. He believes that the good results obtained by operators are attributable entirely to the careful preparation of the patient before operation.

70 Fibroma Molluscum Gravidarum.—Brickner describes this condition as a lesion of the skin appearing in the latter half of pregnancy, bearing the histologic characters of fibroma molluscum, but differing from it clinically in its total disappearance postpartum at a time when the other regenerative processes are being completed. Its distribution is limited to the neck, the breasts and the submammary area. The lesions are frequently pigmented, but this is not always the case and is not an essential element of the condition. The pigment runs from a light yellowish brown to a dark brown. The disease forms a clinical entity, hitherto undescribed, whose essential elements are the appearance of fibrous mollusca during pregnancy and their disappearance postpartum. Pathologically the group belongs to the group of fibrous molluscum.

72—See abstract in THE JOURNAL, Oct. 14, 1905, page 1193.

73 Id.—Sept. 30, 1905, page 1022.

Virginia Medical Semi-Monthly, Richmond.
February 9

- 79 Operation for the Radical Cure of Inguinal Hernia Under Cocain Anesthesia. S. McGuire, Richmond.
- 80 Operative Treatment for Tumors of the Neck. J. S. Horsley, Richmond.
- 81 Appeal for Nature's Balance Wheel—Moderation. E. T. Bradv, Abingdon, Va.
- 82 Carcinoma of the Uterus. G. B. Johnston, Richmond.
- 83 *How Physicians Encourage the Use of Patent Medicines. J. T. Graham, Wytheville, Va.
- 84 Galvanic Treatment of Habitual (Chronic) Constipation. M. W. Peyser, Richmond.
- 85 Principles of Surgery. S. McGuire, Richmond.

February 23

- 86 Acute Primary Meningitis. J. B. DeShazo, Ridgway, Va.
- 87 Have We Progressed? D. L. Field, Jeffersonville, Ind.
- 88 Skin Cancer. N. T. DaLaney, Bristol, Tenn.
- 89 Headaches. O. Wilkinson, Washington, D. C.
- 90 Our Business Opportunities. R. O. Huffaker, Chuckey, Tenn.
- 91 Case of Gastro-Duodenostomy. J. S. Horsley, Richmond.
- 92 Cause of Pneumonia. H. G. Graham, Gresham, Neb.

83 How Physicians Encourage the Use of Patent Medicines.—A too great indifference to patients' complaints is mentioned by Graham as one of the many ways in which physicians encourage the use of patent medicines. Even though the symptoms are purely imaginary, the physician should give them careful attention so that the patient will not be gobbled up by the luring advertisements of some patent medicine which gives him relief from his imaginary condition. There is another habit that many physicians have formed, and that is using too many stock formulas. Their use begets the habit of prescribing by routine, and although many of these compounds are good, they will not suit every case for which they are recommended. Then there is the habit of prescribing proprietary medicines. These relieve the patient but do not cure him. By studying each individual case carefully and treating it as indicated, Graham says that these evils can be overcome.

Journal of the Minnesota State Medical Association and the Northwestern Journal, Minneapolis
February 1

- 93 Venesection, Then and Now. C. F. Warden, Mankato.
- 94 Systematic Effects of Cardiac Insufficiency. J. S. Holbrook, Mankato.
- 95 Anemias and a Satisfactory Septum Operation. R. A. Campbell, Minneapolis.
- 96 *Case of Penial Decapsulation for Chronic Bright's Disease. L. F. Schmauss, Mankato.
- 97 Skin Grafting in Burns of the Hands. A. E. Wilcox, Minneapolis.

February 15

- 98 Penial Insufficiency from Autotoxic Strain as Related to Neuritis and Its Treatment. G. F. Butler, Chicago.
- 99 The State Board of Medical Examiners—A Criticism. A. Screener, St. Paul.
- 100 Considerations on Eye-strain and the Neurologists. F. J. Brown, Minneapolis.

96—See abstract in THE JOURNAL, Sept. 9, 1905, page 812.

Oklahoma Medical News Journal, Oklahoma City

February

- 101 Far from the Madding Crowd W B Park, South McAles
- 102 Multiple Neuritis M A Miles, St. Louis
- 103 Medicine as a Business A D Updegraff, Anthony, Kansas
- 104 Latent Rheumatic Conditions J R Phelan, Oklahoma City
- 105 Physiologic Therapeutics J C Edwards, La Junta, Colo
- 106 Imitations of Medicine R A Pierce, Howard, Kans

Journal of the Missouri State Medical Association, St. Louis.

February

- 107 Recurrent Zoster and Neuritic Repeating Herpes J Grin
- 108 Congenital Dislocation of the Hip N Allison, St. Louis
- 109 Penile Tumors of the Infant R Hill, St. Louis
- 110 Rectal Palpation J A Babler, St. Louis
- 111 Medical Observations in the Far East M McLean, St. Louis

American Practitioner and News, Louisville, Ky.

February

- 112 Injuries of the Urinary Bladder J Abell, Louisville
- 113 Viral or Spring Conjunctivitis W Chatham, Louisville
- 114 Parasitic Infections W B Tucker, Louisville
- 115 Prophylaxis of Scarlet Fever J S King, Bluff City, Tenn
- 116 Injuries of the Head S Anderson, Louisville

Canadian Practitioner and Review, Toronto, Canada

February

- 117 Cataract and Optic Nerve Atrophy J P Morton, Hamilton
- 118 Medical Thoughts Facts and Fancies J S Sprague, Stirling, Ont

Journal of Nervous and Mental Disease, New York.

February

- 119 Progressive Muscular Atrophy A Study of the Causes and Classifications C L Dana, New York
- 120 Hereditary Stigmata Caused by Organic Brain Lesions H H Hoppe, Cincinnati
- 121 Case of Crural Monoplegia Probably Representing the Early Stage of a Unilateral Ascending Paralysis Due to Degeneration of the Pyramidal Tracts C K Mills, Philadelphia
- 122 Separate Sensory Centers in the Parietal Lobe for the Limbs W G Spiller, Philadelphia

New York State Journal of Medicine

February

- 123 Present Status of Vaginal Cesarean Section M Stamm, Tremont, Ohio
- 124 Acid Intoxication of Pregnancy H McM Palster, New York
- 125 Experiences with Apomorphia G H Peddle, Perry, N Y

Kansas City Medical Index-Lancet

February

- Thoughts on Infection, Particularly Its Secondary Action on the Heart C B Hardin, Kansas City
- Lectures on Nervous and Mental Diseases J Panton, Kansas City
- 128 Hemorrhoids and Their Treatment by the Ethical Practitioner A W McArthur, Kansas City

Vermont Medical Monthly, Burlington

February 15

- 129 Diseases of the Nutrition Diabetes Gout, Obesity and Gall stones A Lorand, Carlsbad, Austria
- 130 Legal Requirements of the Medical Profession C T Russell, Burlington
- 131 Reciprocal Relations of Vermont W Scott Nay, Underhill
- 132 Wood Alcohol Poisoning H A Bogue, Richford, Vt.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal

February 17

- 1 Relation of the Medical Profession to War A H Keogh
- 2 Tuberculous Disease of the Lungs and Larynx B Bramwell
- 3 *Acute Abdominal Disorders G Heaton
- 4 Stagnation of Food in the Stomach A McPhedran
- 5 *Review of a Series of Operations for Cancer of the Stomach B G A Moynihan
- 6 *Treatment of Perforating Typhoid Ulcers F L A Greaves
- 7 *Treatment of Diphtheria T B Rhodes

3 Acute Abdominal Disorders—Heaton discusses the differential diagnosis between acute intestinal obstruction and other conditions which closely simulate this affection in their symptomatology and which often are mistaken for obstruction. The affections discussed in this connection are biliary or renal colic, perforation of gastric or duodenal ulcer, rupture of an appendiceal abscess, tuberculous peritonitis, acute hemorrhagic pancreatitis, and embolism or thrombosis of the superior mesenteric vessels. No new points are brought out.

5 Cancer of the Stomach—Moynihan has operated on 59 patients suffering from cancer of the stomach. Gastroenterostomy was performed 35 times, with 5 fatalities. The anterior operation (with Murphy's button) was done 7 times, with 2 fatalities. The posterior operation (with suture) was done

28 times, with 3 fatalities. Gastrectomy was done 10 times, with 3 fatalities. The complete operation was done once, with one fatality, the partial operation was done 7 times, with one fatality, and the partial operation, with resection of the transverse colon, was done twice, with one fatality. Gastrostomy, for carcinoma at the cardiac end of the stomach, was done 5 times, with no fatality. Jejunostomy was done 3 times, with no fatality. Exploratory laparotomy (operation not necessary or not possible) was done 6 times, with fatality. Of the 30 patients who survived gastroenterostomy, 20 were traced to the time of their death, 6 are alive and well, and of 4 nothing is known. The earliest death among these occurred in the fourteenth week after operation, the latest two years and four months after operation. Of the gastrectomy cases, one patient has lived four and a half years and is quite well and free from recurrence. Four others have survived the operation between two and a half years and five months. The gastrostomy patients lived from five to seventeen months after operation. The jejunostomy patients lived from four and a half to eleven weeks after operation. In all these cases the stomach was so extensively involved that gastroenterostomy was impossible.

6 Treatment of Perforating Typhoid Ulcers.—Greaves reports 3 cases of this condition in which the patients were operated on. Two of the patients recovered completely.

7 Treatment of Diphtheria.—Rhodes believes that the very slightest excuse should be sufficient for the diagnosis of diphtheria in a child. Even so slight a sign as dryness or a parched appearance of the external nares in a child who seems poorly nourished is sufficient to indicate, in most cases, that diphtheria toxin is being manufactured, probably in the nasopharynx. He holds that diphtheria antitoxin never does any harm to a child and that it will assist in curing illness due to some disturbance in the throat or nasopharynx, even if that illness is not actually due to diphtheria. The time lost by delay in giving antitoxin in diphtheria is often sufficient to render the chance of recovery very small. Rhodes states that, though many experienced workers in the field of infectious diseases insist that very large doses are much more efficacious than small ones, sufficient stress is not laid on the fact that small doses, even though given late in the disease, will often just turn the scale in favor of the patient, or at least assist the patient to fight the disease and to hold it in check until the child can be taken to a hospital, where more antitoxin can be given. Finally, if every general practitioner would carry a syringe and one phial of antitoxin much more antitoxin would be given before the child is removed to hospital, the necessary delay in getting the antitoxin at present, and the difficulty, sometimes, in obtaining it, especially in country districts, being possible reasons why this treatment is not adopted immediately in all cases.

The Lancet, London

February 17

- 8 Appendicostomy and Its Possibilities W H Bennett
- 9 Physical Anthropology and Ethnology of British New Guinea C G Seligmann
- 10 The Acute Abdomen W H Battle
- 11 *Large Teratoma of the Neck Successfully Removed from an Infant Three Weeks Old A N McGregor
- 12 *Case of Persistent Aberrant Thyroid E W Sharp
- 13 *Saccular Dilatation of the Small Intestine D Cantley
- 14 Pneumothorax Due to Muscular Exertion in a Healthy Lad W G Nash
- 15 Cases of Stomatitis and Tonsillitis in which Vincent's Spirocheta and Bacillus Were Present W H Harwood Yarred, and P N Panton
- 16 Case of Addison's Disease Rapidly Fatal, with Symptoms of Acute Toxemia H C Lecky
- 17 *Method of Removing Carcinoma of the Ascending Colon F D Bird
- 18 Malta Fever in India Isolation of the Micrococcus Melitensis from the Milk of a Domestic Goat in the Punjab W H C Forster

11 Teratoma of Neck—The tumor in the case cited by Mc Gregor was a multilocular cystic mass of about the size of a turkey's egg and of an irregularly conical shape. It contained both mesoblastic and epiblastic elements, so that it probably originated from an abnormal development of one or more of the branchial arches of the embryo. Some of the cysts were lined with a single layer of cuboidal or round cells, while others appeared to have several layers of cells. Some of the cysts had the characters of a dilated gland duct, and gave an

adenomatous appearance to the tumor section. The intercrystic part of the tumor contained cartilage, spindle-celled connective tissue, non-striated muscle, arteries, veins and capillaries.

12. Persistent Aberrant Thymus.—Sharp's patient, a woman, aged 24, sought advice about a swelling in her neck, which had first been noticed when she was 11 years old, at which time constitutional treatment was tried to reduce it. It had gradually grown larger and had given rise to a marked swelling, situated at the base of the neck on the left side and extending from beneath the posterior border of the trapezius and also passing behind the clavicle. The growth, which was of about the size of an ordinary potato, had the structure of a lobulated gland with a capsule and intersections of fibrous tissue. On section it was found to consist of a mass of leucocytes, containing in their midst numbers of Hassall's concentric corpuscles of various sizes, some invaded by the leucocytes. The growth was divided by fibrous intersections, of which the larger contained fair-sized blood vessels.

13. Sacular Dilatation of Small Intestine.—Cautley describes a remarkable anomaly of development in a female infant who died at the age of five weeks. She was admitted to the hospital with a history of vomiting since the third day of life. This had steadily persisted, and after the seventh day of life. The abdomen was unduly prominent on the right side and a tumor of about the size of a pullet's egg could be felt to the right of and on a level with the umbilicus. The tumor was fairly movable, elastic, sometimes dull and at others resonant on percussion, and it would disappear entirely after moderate gentle manipulation. The liver dullness in front was completely absent. An inguinal hernia was present on the left side. The patient took food well, the vomiting ceased and the stools became almost normal. Later vomiting began again, but it stopped after two doses of cocaine and a return to the diet of whey. Finally she became very feeble and cold and died from asthenia. There was no return of vomiting or diarrhea. On opening the abdomen a cyst with opaque walls was seen immediately below the liver. The transverse colon was pushed downward and the liver upward, so that the edge of the latter was not visible, thus counting for the absence of liver dullness anteriorly during life. The cyst was considerably larger than the stomach, which was of normal size. The cyst measured three inches vertically, two inches transversely and one inch in the anteroposterior diameter. It was situated in the mesentery, arising from the gut at a distance of fifteen inches from the pylorus. It communicated with the gut by two adjacent openings close together, the larger one was slightly smaller than a dime and the smaller one was quite minute. The edges of the cyst were smooth and irregular. In general appearance the cyst was similar to a sacular aneurism of the aorta with a small orifice. The duodenum and a small part of the jejunum above the origin of the cyst were much dilated and hypertrophied while, below the intestine was thin walled and collapsed. Opposite the cyst the lumen of the canal seemed somewhat narrowed from pressure, but there was no true stricture. Both cyst and intestines contained normal bile-stained contents. Microscopically the wall of the cyst was identical with that of the intestine from which it arose, the muscular tissue being considerably hypertrophied.

17. Removal of Carcinoma of Colon.—In a case of carcinoma of the ascending colon, about three inches beyond the cecum, Bird operated according to a method devised by him. The tumor is located and, its removal being decided on, the transverse colon is pulled down two forceps are applied to it close together with a heavy one on the proximal side and the gut is divided with large scissors in one cut. Swabs are used to avoid soiling the cavity, and the heavy forceps attached to the gut is allowed to hang out of the wound, a proceeding which puts the mesocolon on the stretch. The branches of the middle colic artery and the right colic artery are tied far back by a single ligature which devascularizes a large portion of mesocolon which can be severed by large scissors. Forceps are then placed on the ileum about four inches from the junction of the large and small intestines and the gut is divided. The distal end now depends from the wound, so that the whole portion to be resected is hanging by the ileocolic artery and some peritoneum.

This blood vessel is ligated far back, the isthmus of tissue left is divided close to it, and the resected gut, two forceps and the ileocolic glands fall out of the wound altogether. There is no need to investigate the important ileocolic lymphatic area, for it has gone, but the mesocolic region should be examined for glands which may have escaped the section.

Thus four, or at most five, arteries have to be tied, the transverse colon is divided at right angles to its lumen, but the ileum if it approaches the caliber of the colon closely enough to allow of apposition, is severed in a direction obliquely downward to the mesenteric attachment, which, of course, increases the size of the open end. If the disproportion be too great, the ileum is also separated at right angles, the patent lumen to be afterward applied, by means of temporary sutures, to an incision, proportionate in length, in the fundus of the colon about two inches from the gaping end, through which the stay ligatures are pulled, reversing Maunsell's method. The new ileocolic junction is quickly made by through and through sutures, to be reinforced after the ileum is pulled back by a continuous Lembert suture.

Glasgow Medical Journal
February

- 19 Double Lip (Hypertrophy of Labial Glands) G H Edington
- 20 *Case of Exophthalmic Goiter in a Man Treated Successfully W F Somerville
- 21 Roentgen Rays in the Diagnosis of Urinary Calculus J R. Riddell.

20 Treatment of Exophthalmic Goiter.—The treatment adopted in the case reported by Somerville was isolation, with, at first, complete rest in bed. The windows of the large bedroom were wide open night and day. The patient, a man, was placed on a very liberal diet. In addition to three "square" meals, of which he partook largely, he had soup twice, a large afternoon tea and eighty ounces of milk per diem. He was twice daily treated by the high frequency currents and every second day five mp were applied by the continuous current for ten minutes, the positive pole being placed over the thyroid, the negative at the back of the neck. The patient had, further, heart massage each day, i e., gentle stroking over the precordial region by a skilled masseuse. During the last two weeks he was permitted to go out, when the weather was fine, for a short walk on level ground. The medicinal treatment consisted in the use of the thyrodectin, which was replaced later by strophanthus, 2 minims every four hours, and thymus gland, 5 grains thrice daily. Later, dram doses, three times a day, of syrup of hydriodic acid were commenced and continued to the end. Smoking was at first prohibited, but later one cigar a day was allowed, no alcohol was administered, but the patient had *café au lait* twice a day and tea once. All the symptoms show signs of improvement, with the exception of the rate of the pulse, which remains from 87 to 95 a minute. Somerville attributes this return of tachycardia to the want of the high frequency currents, which have an inhibitory influence on the heart's action.

Dublin Journal of Medical Science
February

- 22 Diagnosis and Treatment of a Perforated Gastric Ulcer A. R. Parsons.
- 23 *Treatment of Gastric Vomiting with Oxalate of Cerium C A Sweetnam.

23 Cerium Oxalate in Vomiting. — Within the last few months Sweetnam has been using cerium oxalate largely in cases of vomiting due directly to gastric disease, usually giving six grain doses three times a day in adult patients, combined with ten-grain doses of carbonate of bismuth. In almost every case the result has been most satisfactory, and in several instances, when bismuth alone has failed to cause any marked improvement, a rapid change for the better has appeared when cerium oxalate has been added to the medicine. In gastric ulcer the pain is relieved and the vomiting ceases almost immediately, the same result occurs in chronic catarrhal gastritis, especially the form which is so common among badly nourished young women, whose work deprives them of their proper quantity of fresh air. In cancer of the stomach, although a permanent cure can not be expected, the symptoms are relieved and the patient's life is prolonged and made far more comfortable than by any other means. The pain is lessened, hematemesis ceases and the patients who have been unable to retain the smallest quantity of food taken by the mouth are soon able to retain several pints

of milk per diem and also small quantities of the prepared nutritious food. This of course does not hold good in cases in which the pyloric region is largely involved and in which the symptoms are mainly due to a mechanical obstruction of that opening.

Presse Medicale, Paris

- 24 (NIV, No 5) *1. traitement chirurgical de l'aneurysme sous-axillaire. Savarand
25 *2. traitement d'aneurysme. I. Hartenberg
26 *3. traitement d'aneurysme. II. Hartenberg

24 Surgical Treatment of Aneurysm of Subclavian Artery.—Savarand calls attention to the advantages of making more than one incision thus obtaining better oversight of the field, also to the finer results from the use of the ligature in the case reported notwithstanding the dilated and weakened condition of the artery. Also to the advantage of hollowing out a tunnel underneath the clavicle instead of resecting it thus refraining from impairment of function later. Another point which he emphasizes is that the presence of aneurysm does not necessarily imply healing, or even a tendency in that direction, as he has frequently had occasion to observe in the clinic and in the autopsy. The part of the subclavian involved close to the axillary is comparatively free from collaterals, and the branches of the axillary anastomose so frequently that there is no danger of gangrene. Out of 14 cases in which the second part of the subclavian and 9 in which the third part was ligated, only 1 patient died of pulmonary embolism. Ligature of the first part of the artery is much more serious. Resection of the aneurysm is more dangerous than mere ligation, 1 patient died out of the 7 on record treated by extirpation. These conclusions apply only to an aneurysm outside of the scalenus muscle. When the origin of the artery is involved the indications and prognosis are quite different.

25 "Rheumatic Migraine"—Hartenberg refers to the headache which occurs as one manifestation of the peculiar diathesis or disposition which predisposes to joint disease. He calls it the 'migraine of the arthritic' and is convinced that the pain is the result of compression of the nerve terminals by congested blood vessels. Everything that increases the pressure or the spasm—stooping over, any shock, compression or electric stimulation—increases the pain. The nausea and the photophobia are explained by the disturbances in the circulation through the meninges. All these angiospastic phenomena can be reproduced by irritation of the cervical sympathetic. The pathologic irritation is the result, he thinks, of a rheumatoid infiltration of the muscles, a "rheumatic myositis." When the case is recent the muscles are still elastic and supple, but in cases of long standing hard lumps can be palpated in the muscles. The myositis proceeds by waves, under the influence of fatigue, traction on the muscles, dampness, etc. The ganglia may be indurated and the skin infiltrated and thickened. The superior cervical ganglion is always hypertrophied and tender, and sometimes the inferior and the middle ganglia. This is the true cause of the migraine, which may be regarded as a reflex neurosis, similar to certain forms of reflex epilepsy. He has been very successful with treatment based on these assumptions. Sodium salicylate is applied directly to the affected tissues. He accomplishes this by polar electrolysis, placing a negative electrode, impregnated with a 20 per cent solution of sodium salicylate on the neck, with the positive electrode on the abdomen or on the back in the lumbar region. The current he prefers is from 15 to 50 milliamperes, and each sitting is half an hour in length. Under the influence of the galvanic stimulation and of the specific drug the cervical rheumatism rapidly subsides. The attacks of migraine become milder and recur at longer and longer intervals until they finally cease altogether. On account of the tendency to recurrence it is advisable to resume the electric treatment with a few sittings from time to time. Hartenberg has treated a number of patients on these principles in the last two years, the results corroborating his conception of the causal mechanism and suggesting that possibly something of the kind may be a factor in other neuroses, especially in certain forms of epilepsy.

26 Circular Incision of the Leg for Varices.—Hardown's technique is practically the same as when commencing amputa-

tion of the leg, the incision running around the limb. He has found the results extremely satisfactory, rapidly curing the severest cases of varicose ulcers and doing away altogether with the possibility of recurrence. One of the most remarkable benefits of the operation is the way in which the leg shrinks to normal size almost at once afterward.

Semaine Médicale, Paris

- 27 (XXVI, No 6) *1. Le corpus luteum. R. de Bovis
28 (No 7) *2. La splénectomie contre l'anémie splénique et la maladie de Banti. B. Schiassi (Bologna)
29 *3. Mortalité par tuberculose en France et en Allemagne (Germany)

28 Rational Operative Treatment of Splenic Anemia.—Schiassi reviews the history of splenic anemia and Banti's disease and their operative treatment. In certain individuals, he says, the spleen seems to be less resistant than normally and infectious germs are liable to locate in that organ and to cause structural changes which may induce functional disturbances. Removal of the spleen is a logical method of treatment, but is not proving so satisfactory in practice as was expected. Schiassi believes that the trouble in splenic anemia, with or without cirrhosis of the liver, is some metabolic, biochemical phenomenon which affects the blood injuriously in the interior of the spleen and nowhere else. Treatment should aim to reduce the quantity of blood circulating sluggishly in the enlarged interspaces and to hasten the circulation through the spleen. To obtain this double result he tries to induce the formation around the spleen of a large capsule of connective tissue. This he accomplishes by introducing broad overlapping strips of gauze to form an envelope of a single layer of gauze entirely around the organ after most of its surface has been scraped with the sharp curette. The incision is sutured in tiers, with the ends of the strips of gauze emerging. On the fifth or sixth day the upper strip of gauze is pulled out and the other strips on the succeeding days, one each day until all are removed by the ninth or tenth day, and the rest of the incision can be sutured. The result of this irritation of the surface is the formation of a large amount of connective tissue, which clings to the spleen, reducing its size and congestion, while a network of new veins forms and diverts part of the circulation from the interior of the spleen. He has performed this operation on two patients with splenic anemia. In the first patient the hemoglobin had been reduced to 24 per cent and the white corpuscles to 1800 to the cubic millimeter, while the spleen measured 18x32 cm. Four months after the operation the hemoglobin had increased to 92 per cent. The hemoglobin in the second patient had been reduced to 40 per cent and there were only 4,000 white corpuscles to the cubic millimeter, while the spleen measured 30x20 cm. In the course of three months after the operation the hemoglobin reached 84 per cent. The spleen in each case had become reduced to one fifth its former size. The great improvement thus gained has persisted unmodified for a year. He regards fresh bone marrow and rest in bed, with abundant feeding, as important adjuncts for operative treatment. He has had no experience with this operation in Banti's disease, but thinks that omentopexy supplemented by this procedure is theoretically indicated, the former suppressing the ascites and the latter putting an end to the morbid intra-splenic metabolic phenomena. He operated four years ago on a woman with pronounced splenomegaly and cirrhosis of the liver with ascites, a typical case of Banti's disease. His intervention consisting in omentopexy and splenopexy. The patient is still in comparative health, the great improvement realized persisting to date.

Berliner klinische Wochenschrift

- 30 (XLIII, No 3) *Zur Kasuistik des doppelseitigen Empyems. S. Laache
31 *Anti-Hemolysis Biologic Blood Test—Die forensische Blutdiffferenzierung durch antihämolytische Wirkung. M. Nelsner and H. Sachs
32 Die Phagocytose-Behinderung des Subtilins durch das Subtilin-Aggressin. E. Weil and H. Nakayama
33 *Inhibitory and Anesthetic Properties of Magnesium Salts—Die hemmenden und anästhetisierenden Eigenschaften der Magnesiumsalze. S. J. Meltzer
34 Conduction of Sensibility in Spinal Cord—Lettung der Sensibilität im Rückenmark. M. Rothmann (Concluded)
35 Zur Behandlung der Neuritis durch Alkoholeinspritzungen (alcohol injections). Schloesser
36 Determination of Bacteria in Blood and Its Importance—Nachweis von Bakterien im Blut und seine Bedeutung. H. Beltzke

- 37 •Behandlung der Hemeralopie mit Leber Substanz (liver) H Fabry
 38 Ein neues Tonsillen Instrument. I C Henkes (Amsterdam)
 39 (No 4) Behandlung der Lungen tuberkulose mit Marmorek's Serum. E Stadelmann and A Benfer
 40 Behandlung der Tuberkulose mit dem Antituberkuloseserum Marmorek's E Levin
 41 Zur Lehre von den Antikomplementen. C. Moreschl
 42 Rise in Temperature After Use of Thiosinamia—Temperatur Steigerung nach Thiosinamia Gebrauch E Bräntzner
 43 Die Prognose der otogenen Meningitis B Heine

30 Bilateral Empyema.—Lauche has had 2 cases of bilateral empyema in his charge. One patient was a young man convalescing from pneumonia. Severe hemorrhage from the lungs followed an exploratory puncture of the second lung after the other lung had been punctured and was healing. The pus was removed by resection of a rib in the back. The patient succumbed in the second case, in which the empyema was of actinomycotic origin.

31 Antihemolytic Test for Blood.—This new test for forensic differentiation of blood spots was described recently in these columns on page 310. Further experience, Neisser states, has confirmed its delicacy and reliability.

33 Inhibiting and Anesthetic Action of Magnesium Salts.—The latest report on Meltzer's work with the magnesium salts was published in THE JOURNAL, March 3, 1906, page 647.

37 Liver in Treatment of Hemeralopia.—A few cases have been published here and there of remarkable benefit or cure of hemeralopia by feeding the patients with liver substance. Fabry reports another case in which the same remarkable result was obtained when the patient was given from 200 to 250 gm of raw sheep's liver on three successive days. The patient was the native guide on an expedition in Africa. During the day his eyesight was above the average, but as the sun set he was unable to see at all. The affection had lasted three months, but subsided after the liver had been taken for three days.

Centralblatt f. Chirurgie, Leipzig

Last indexed page 311.

- 44 (XXXII No 52) •Mehre Methode der Gastroenterostomie nebst Statistik der nach ihr gemachten Operationen. F de Beule (Ghent, Belgium)
 45 •Simple Technic for Extraction of Foreign Bodies in Urethra.—Ein einfaches Verfahren der Entfernung in der Harnröhre einzelner Fremdkörper P Schroeter
 46 (XXVIII No 1) Tendinitis achillea arthritica als eine besondere Form der Achilles Sehnen Erkrankung R v Baracz Id G Drehmann
 47 Zur Roentgen Therapie der Haut Sarkome Albers-Schönberg
 48 (No 2) Improved Technic of Resection of Shoulder.—Resektion des Schultergelenkes. A Caterina
 49 Ring Knoten (knots)—For Tying Deep Ligatures A Hofmann
 50 Zum Gallen Stein Heus F Fink
 51 (No 3) •Zur Technik des Bier'schen Verfahrens bei der Staunungs Hyperämie (congestive hyperemia) J Mindes
 52 •Rhinochirurgische Mittellungen L Grünwald
 53 (No 4) Ueber primäre Naht ohne Drainage bei Früh Operation der neuen Appendicitis (primary suture) J Borelius
 54 (No 5) Zur Behandlung des Duodenal Stumpfes bei der Resektions Methode Billroth II Kausch
 55 •Laminectomy und Nerven Wurzel Durchschneidung bei Neuralgie R Oehler
 56 (No 6) •Application of Water Power in Surgery and Orthopedics.—Anwendung der strömenden Wasserkraft in der Chir. und Orthop. (Ein neues System orthopädischer und medikomechanischer Apparate.) Machol

44 De Beule's Button for Gastroenterostomy.—De Beule remarks that a year's experience has confirmed the superiority of his button which has now been used in 22 gastroenterostomies. It is a mechanical impossibility for the vicious circle to develop or for any bile or pancreatic juice to find its way back into the stomach. The passage through the button turns to form a right angle the opening into the stomach being in the top of the button while the opening in the duodenum is in the side. By this arrangement it is almost impossible for fluids to find their way around the button and to pass backward through it. Eight different surgeons have used the button to date including Bier, Gersuny and De Beule himself and the mortality has been only half that reported by the best surgeons from other methods. The new button has certain special features that commend it for cancer cases he adds. It much shortens the gastroenterostomy and allows the patient to be fed from the first day.

45 Technic for Removing Foreign Body or Concrement from Male Urethra.—Schroeter has been successful with the following simple procedure. If any urine is able to escape past the

foreign body, the outer orifice is closed with the fingers and the patient is instructed to urinate as much as he can, forcing the urine into the urethra until it is much distended with it. The orifice is then abruptly released and the escaping flood sweeps out the foreign body with it. If no urine is able to pass the foreign body, he applies a constricting band above it and then injects water into the urethra to distend it from below, compressing the orifice and allowing the fluid to escape suddenly when the urethra has been sufficiently distended.

51 Technic of Congestive Hyperemia.—Mindes gives an illustration of the elastic roller and band which he uses for inducing congestive hyperemia. The aim is to induce red hyperemia, if too weak, the constriction does no good, if too strong, it causes blue or cold hyperemia and is liable to do serious damage. Consequently the roller band, allowing more accurate technic, has been found a great improvement. The roller is wound up with a key to the proper notch, where it is held by a click, holding the broad elastic band firmly in place.

52 Two Rhino-surgical Interventions.—One operation described by Grünwald was for the exposure of the interior of the nose and of all the accessory cavities at once, the particulars of the two incisions required being shown in two illustrations. The second operation illustrated is the resection of the vomer as the final step in the radical operation on the frontal sinus.

55 Laminectomy and Division of Nerves for Neuralgia.—Oehler commends an operation which he performed, after removal of a cancer in the breast, to cure the intense pain resulting from compression of the brachial plexus by some metastatic nodules. He exposed the dura by resecting the right arches of the fourth, fifth, sixth and seventh cervical vertebrae and of the first dorsal. He then resected the posterior roots of the fifth, sixth, seventh and eighth cervical nerves and of the first thoracic nerve. The wound was sutured at once without drainage, and the relief from pain amply justified the interference. The arm became entirely paralyzed, but this was inevitable from the way in which the nerves of the arm were imbedded in the metastatic nodules.

58 Application of Water Power to Surgery and Orthopedics.—Machol describes a method of correcting deformities by constant pressure in use at Garré's clinic, in which the motive power is a stream of running water. The force is equable, can be exactly controlled, acts automatically and has other advantages which he enumerates. An illustration shows the apparatus adapted for correction of scoliosis. The patient lies on a duck extension table, the extension being applied to head and pelvis. The frame of the table is made of two pipes connected with the water system. An arching frame fits on the pipe and carries the pump contrivance with the attachment for applying the correcting pressure. A little manometer on each pump shows the exact pressure of the water. The water pipes can have as many branches as desired to apply correction at various points. The power applied is very even and constant, and can be kept up for hours under precisely similar conditions, the pressure yielding to and following the part to be corrected. He gives an illustration of the apparatus adapted to apply the water power in mobilizing joints, etc.

Zentralblatt für Gynäkologie, Leipzig.

Last indexed page 470

- 57 (XXX No 1) •Caesarean Section.—Zur Lehre vom Kaiserschnitt. R Olschhausen
 58 •Ueber die Verhütung der Fieberfälle im Wochenbett (prevention of puerperal morbidity) P Zweifel. Reply by Ahlfeld
 59 •Die Vaporisation des Uterus K. Balsch
 60 Stadium des Geburtsmechanismus. H Sellheim
 61 (No 2) •Ueber den Nachweis von Fleisch Milchsäure in der Cerebrospinal flüssigkeit Eklampptischer (meat lactic acid in cerebrospinal fluid) H Fäth and G Lockemann
 62 •Eine seltene Indikation zum Kaiserschnitt (Caesarean section) Brannet
 63 Näheres zum Tonsilverlust der Gebärmutter bei der Curettage (loss of elasticity in walls of uterus) C. van Tussembroek
 64 Gehurt bei Uterus duplex bicornis cum Vagina septa. F Stahler
 65 (No 3) •Symphysiotomie oder Pubotomie? W Stöckel
 66 •Zur Hebomiotomiefrage A Döderlein
 67 •Zur Anatomie und Technik der Pablotomie J Tandler
 68 •Ueber die Art der Beckenerweiterung bei der Pubotomie (enlargement of pelvis) W Rosenfeld
 69 (No 4) •Ein Versuch die "Katheter Cystitis" zu verhindern (prevention) R Gersuny
 70 Puerperal Self Infection.—Ein Wort zu meiner Rechtfertigung gegenüber Natvig F Ahlfeld

Münchener med Wochenschrift, Munich.

- 83 (LII, No 52) *Superheated Air in Gynecology—Beiträge zur Heißlufttherapie bei Becken Entzündungen Ph Jung
- 84 *Die Tuberkulin Therapie in der ambulanten Behandlung und bei Fiebernden (for out patients and febrile cases) Krause
- 85 *Ueber Brachialgie H Brassert
- 86 Acetone for Rapid Imbedding in Paraffin—Ueber die Azeton anwendung zur Paraffineinbettung A. Brunkh.
- 87 Kompression der harntführenden Organe durch Adnextumoren (compression of ureters) M Nassauer
- 88 Extensions Bähre (Itter) A Hofmann
- 89 *Ueber die Hebotomie (extramedian symphyseotomy) A. Bauereisen (Concluded)
- 90 (LIII No 1) *Operations in Sauerbruch's Air Chamber—Bericht über die ersten in der pneumatischen Kammer der Breslauer Klinik ausgeführten Operationen. Sauerbruch
- 91 *Beitrag zur Tuberculose-Frage auf Grund exp Untersuchungen an anthropoiden Affen. v Dungere
- 92 *Fatigue Toxin—Ermüdungstoxin und dessen Antitoxin W Weichardt
- 93 Acquired Photoactivity of Tissues—Erworbene Photoaktivität der Gewebe als Faktor der biologischen Strahlenwirkung und ihrer Imitation R. Werner
- 94 Relations Between Emotions and Heart Disturbances.—Ueber die Beziehungen von seelischen Empfindungen zu Herzstörungen L. R. Müller
- 95 Bruchefinklemmung einer Appendix epiploica (Isolated incarceration in inguinal hernia) von Bruns.
- 96 *Wesen und Wirkung von Schlangengiften mit kasualistischen Beiträgen (snake bites) Lotze.
- 97 *Ueber prophylaktische und therapeutische Anwendung des Antistreptokokken Serums. F Fromme
- 98 Behandlung der fibrinösen Pneumonie mit Romers Pneumokokken Serum Winkelmann
- 99 Sound Impermeable to Roentgen Rays.—Eine für Röntgenstrahlen undurchlässige biegsame Sonde R. Freund

83 Superheated Air in Gynecology—Jung confirms his previous announcements in regard to the great efficacy and value of local application of superheated air as a means of promoting absorption of the products of acute and chronic affections of the adnexa and connective tissue in the pelvis. He has applied it in 137 cases. It avoids the injurious influence on the nervous system inevitable with some of the older methods requiring local manipulations. The pus or effusion is evacuated by an incision, with drainage, and then the superheated air is applied. After the patient is rubbed off she can go out of doors almost at once without danger of chilling. All acute processes contraindicate superheated air, including all febrile patients and those in whom pronounced hyperleucocytosis indicates impending or recent suppurative softening. High fever and other inconveniences are liable to be observed if superheated air is applied in these conditions. The special indications for it are exudation in the connective tissue or inflammatory tumefaction of the adnexa, chronic pelvic peritonitis with adhesions, or chronic indurations and cicatricial tissue in the pelvic connective tissue. It is astonishing sometimes how the old, hard masses soften and vanish under the influence of the hot air. Further indications are the cases with pus requiring incision. After evacuation of the pus and decline of the acute symptoms the hot air will aid in the absorption of the remains of the morbid process. Still another favorable group includes those with exudation in the stump after an operation. Hysterical-neurasthenic disturbances are not benefited by the hot air, except, possibly, from the suggestion.

84 Tuberculin Treatment for Febrile and Out-Patients.—The warning is generally given that fever contraindicates tuberculin treatment. Krause has been giving a course of tuberculin treatment to febrile and other patients for whom sanatorium treatment was impossible. The results have justified his expectations, benefit being apparent in every instance. He used Koch's bacillus emulsion in a 1 per cent. dilution in salt solution the dose of bacillus substance ranging from 0.05 to 0.3 mg. In the milder cases all the catarrhal manifestations were banished and they were always mitigated in the severer cases, while the fever vanished permanently in all. This effect on the fever in cases in which it had resisted all other measures was most striking, as also the benefit in the larvgeal tuberculous processes.

85 Brachialgia.—Brassert describes a case and declares that probably many cases of supposed traumatic reflex neuralgia are in reality cases of brachialgia. Treatment should be by suggestion and general, not local measures. Local applications and advice to rest and to spare the arm merely perpetuate the brachialgia. Prompt recovery is the rule when treatment is by diversion and use of the arm.

89 Hebotomy Extramedian Symphyseotomy—Bauereisen concludes his extensive monograph on the subject, based on considerable personal experience, with a discussion as to whether or not delivery should be left to Nature after the pelvis has been enlarged by sawing the pubic bone. He thinks that natural delivery should be awaited after the bone has been sawed through.

90 Operations in Sauerbruch's Air Chamber—Sauerbruch reviews the 15 important operations on heart, lungs or esophagus that have been done with the aid of his air chamber. It allows the lung to expand in an atmosphere with a pressure below that of the surrounding air. The chamber has been described fully in these columns. He relates that when the thorax was opened wide the respiration and pulse remained natural and normal, even in the case of one patient who was much debilitated from cancer of the esophagus and from addiction to alcohol. The results of the experiences since March, 1904, when the chamber was first used, have fully realized many of the hopes aroused by the results of experiments on animals.

91 Inoculation of Monkeys with Tuberculosis.—The experiments were made in Sumatra. A large number of gibbons had been collected by the Dutch authorities on the island for the experiments. Von Dungere remarks that it was astonishing to see the small amount of food (ripe fruit) required by the monkeys to keep them in good condition. No difference could be discovered in the effect of human and of bovine tubercle bacilli when inoculated into the monkeys. The facts observed corroborate the dangers for man of infection with bovine as well as with human tubercle bacilli.

92 Fatigue Toxin and Antitoxin.—This is Weichardt's fourth communication on this subject. He here announces that the albumin molecule has the tendency to split off certain toxic substances as it breaks up. These toxic substances, he states, are by products in the formation of stable compounds. According to his conception, the fatigue toxin is thus neither a product of reduction nor of oxidation, but a by product that originates as the albumin molecule begins to break up and one that induces the production of a specific antibody.

96 Snake Bites.—Recent research on this theme is reviewed in this article and the various methods of treating snake bite are enumerated. Lotze suggests that a cupping apparatus, connected with a suction pump, such as Bier uses to induce congestive hyperemia, might be found useful for sucking the venom out of the wound. Calmette's antivenene should be used when procurable, but if not, a 2 per cent solution of chlorinated lime should be injected. This tends to neutralize the toxins by the gases generated. (See article in miscellany column, March 10, 1906, page 749.)

97 Prophylactic and Therapeutic Use of Antistreptococcus Serum.—Fromme has been making a practice lately of injecting 10 c.c of antistreptococcus serum three or four hours before undertaking an important abdominal or vaginal operation. In 11 out of 13 cases of uterine cancer the after course of the cases was exceptionally smooth, and likewise in 8 cases of other gynecologic affections similarly treated. The general impression was decidedly favorable in regard to prophylactic use of the serum. In several other cases it was administered for therapeutic purposes and the results were less strikingly beneficial. On the whole, the verdict is in favor of its prophylactic use and also for the treatment of incipient streptococcus infections. In case of postoperative peritonitis requiring secondary incision and drainage, the serum may be useful as an adjuvant, but little can be hoped from it in pyemia and septicemia and in infectious processes of long standing. Any powerful reaction will only do harm in this latter case.

Riforma Medica, Naples

Last indexed page 314

- 100 (XXI No 33) Auscultation of the Mouth.—L'ascoltazione orale nella diagnosi differenziale tra alcuni rumori consonanti il soffregamento pleuritico T. Prodi
- 101 *E possibile la diagnosi clinica fra trombosi acuta della porta e dei suoi rami e peritonite perforatoria? S. Solteri
- 102 *Radioterapia e sifilide iniziale. C. Quadroni and A. Gramegna.
- 103 Leiomioma del muscolo bicipite brachiale. A. Cernezzi
- 104 (No 34) *Blood Pressure in Heart Affections.—La pressione sanguigna nei malatti di cuore. C. Gennari
- 105 Contributo alla cura del serratamento catariziale delle mascelle (elastical lockjaw) R. Falcone.
- 106 Spirocheta pallida e infezione sifilitica. A. Risso and A. Cipollina

101 **Differentiation of Thrombosis of Portal Vein from Peritonitis**—Soffer's case of thrombosis of the portal vein complicating round ulcer of the stomach had been diagnosed as peritonitis from perforation of the gastric ulcer. He analyzes the similar cases on record stating that only one was correctly diagnosed during life. Only a few of the patients could be cured by operative intervention. In differentiation the possibility of existence of changes in the liver liable to impede the normal circulation should be borne in mind. The symptoms are like those of perforation peritonitis. Bloody diarrhea is characteristic but it may be substituted by ileus as in the case described. The patient's face was pale and ashy, but not contracted as in case of peritonitis. He experienced intense pain, but the abdomen was not so extremely sensitive to pressure as in peritonitis from the inflammatory irritation of the nerve terminals in the parietal peritoneum. The abdominal wall was not rigid and there was no succussion. There was much more effusion than is common in peritonitis, and it recurred rapidly after tapping. The alarming symptoms come on more slowly in case of thrombosis than in peritonitis from perforation.

102 **Radiotherapy of Primary Syphilitic Lesions**—The writer experiences with x-ray treatment of the primary inguinal bubo shows that such lesions react to the exposures with inflammatory phenomena more intense than are observed in any other form of glandular trouble. A large number of experiences in 1 year of observation are required to decide the question as to the further development of syphilis thus treated.

103 **Blood Pressure in Heart Affections**—Gennari asserts that the blood pressure is always high in case of heart disease or arteriosclerosis whenever there is a complicating kidney affection and that this may be important in differentiating puzzling cases in which the urine does not indicate renal trouble. He always noticed that patients with cardiac affections improved by treatment in the hospital, had a much lower blood pressure than when first admitted to the hospital. The blood pressure increases or diminishes parallel to disturbances in compensation, and may thus serve for the prognosis.

Nordiskt Medicinskt Arkiv, Stockholm.

Last indexed NLF, page 503.

- 107 (XXXVIII Surgery, No. 1) "Treatment of Large Cavities in Long Bones"—Zur Behandlung grosserer schwer heilender Knochenhöhlen in den langen Röhrenknochen. G. Ekchorn.
 108 "Einige Reflexionen über die operative Behandlung des Torticollis praticus." I. Berg.
 109 "Zur Kenntnis der Ectopia ovarii inguinalls." E. Borin.
 110 Fall von Papillom der Gallenblase (of gall bladder). A. Hansson.

107 **Treatment of Non-Healing Cavities in Long Bones**—Ekchorn has been very successful with his technic of lining the cavity in the bone with Thiersch skin flaps. He applies this method in various kinds of acute and chronic affections of the bones leaving a cavity. The procedure is so simple that it can scarcely be called an operation, and if it fails no harm has been done. Healing has not been delayed a moment. If it succeeds—and he has found it especially successful in case of cavities of long standing—then the healing has been materially promoted. Another advantage is that if some small focus has been overlooked it is placed in a favorable condition for healing. One of his patients had suffered from osteomyelitis of the lower end of the femur for twenty five years and had been operated on six times. Again and again the process would recur, and there was always a dull, heavy sensation in the limb and occasionally pain and fatigue. After five years' intermission the process broke out again in an acute form in 1902 and again a year later. It was carefully treated according to the usual measures, but again broke out in 1903. Ekchorn then performed Thiersch transplantation. The cavity was first scraped to sound tissue and tamponed. After two or three days the Thiersch flaps were applied directly from the knife. They were cut in strips long enough to reach from the center of the bottom of the cavity to the edge of the wound in the skin, passing over the bone walls and soft parts. When the cavity was thus lined it was tamponed, using a "tampon tube" for the purpose, and a dry dressing was applied outside. The tampon was left for four or five days until it could be removed without disturbing the flaps. They healed in place in a week or less. The patient was freed at once from all his disturbances and can now use his leg normally without fatigue. Another patient with an osteomyelitic

fistula of long standing was cured in the same way by the Thiersch skin flaps. Another patient was a man of 68 who had had recurring osteomyelitis in the upper end of the tibia since childhood. After failure of other treatment this treatment completely cured the lesion and the tendency to recurrence. The results seem to be particularly fine in these old cavities. The strips of granulations between the flaps soon heal over completely and the part has a permanently healthy aspect.

108 **Operative Treatment of Spastic Torticollis**—Berg presents evidence to show that the drawbacks of operative treatment are comparatively trifling in case of spastic wry neck. Success can be expected only when the operation is extended to conform to the indications of each individual case. In by far the larger majority the muscles of the neck are involved as well as the sternocleidomastoid, and consequently severing the spinal accessory nerve alone does not meet the indications. In the 5 cases reported the cervical nerves and the accessory were divided at different sittings in 3, and the result of each of these partial operations was precisely what was to be expected from the anatomic conditions. This excludes the idea of suggestion as a factor in the final success. All these patients were cured, although a very slight tendency to deviation of the head is still observable in repose. In another case the accessory nerve was merely stretched and psychic treatment according to Brissaud instituted, with the result of a rapid cure to date. Before resorting to surgical measures Berg advises the most extensive application of the Brissaud system of psychic treatment. If operative treatment becomes necessary the prospects are better, the smaller the region involved and the less the psychopathic tendency. Unless the sternocleidomastoid is unmistakably and prominently involved in the spasm, it is useless to resect the accessory nerve. The operation on the posterior branches of the superior cervical nerves should be restricted to division of the second branch at the intervertebral foramen and cautious division of the two contracted muscles at their insertion on the transverse processes of the atlas.

109 **Ectopic Ovary**—In the case described, a woman of 42 with otherwise normally developed genitalia, was operated on for a congenital inguinal hernia. The hernia was first noticed three years before, and it became tender at the time of the menses, otherwise there was nothing abnormal. The hernia suddenly began to increase in size and was operated on. It was found to be a cystic tumor of ovarian tissue, probably an ectopic ovary.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

A TEXT-BOOK OF PRESCRIPTION WRITING AND PHARMACY, with Practice in Prescription writing. Laboratory Exercises in Pharmacy and a Reference List of the Official Drugs. Especially Designed for Medical Students. By B. Fantus M.D., Professor of Materia Medica and Therapeutics. College of Physicians and Surgeons, Chicago. Second Edition. Thoroughly Revised and Adapted to the Eighth (1905) Edition of the U. S. Pharmacopoeia. Cloth. Pp. 404. Price \$3.00 net. Chicago: Chicago Medical Book Co., 1906.

I. New or Noteworthy Philippine Plants, IV. II. Notes on Cumings' Philippine Plants in the Herbarium of the Bureau of Government Laboratories by E. D. Merrill. III. Notes on Philippine Gramineae by E. Hackel. IV. Scitiminaceae Philippinenses by H. N. Ridley. V. Philippine Acanthaceae by C. B. Clarke. Publication of Department of the Interior Bureau of Government Laboratories. No. 35. December, 1905. Paper. Pp. 89. Manila: Bureau of Printing, 1905.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA (The State Board of Health) (organized 1847). Meeting of 1905, at Montgomery April 19-22. Cloth. Pp. 587. Montgomery Ala.: Brown Printing Co., 1905.

THE REAL TRIUMPH OF JAPAN. The Conquest of the Silent Foe. By Louis Livingston Seaman M.D., LL.D. late Surgeon Major of U. S. V. H. Cloth. Pp. 291. Illustrated. Price, \$1.50. New York: D. Appleton & Co., 1906.

OUTLINES OF MEDICAL DIAGNOSIS. Prepared for the Use of Students, at the Harvard Medical School, Boston, 1906. Fourth Edition. Cloth. Pp. 33. Boston. For sale by F. H. Thomas Co., 1906.

FOOD AND THE PRINCIPLES OF DIETETICS. By R. Hutchison, M.D. F.R.C.P. Revised Edition, with Plates and Diagrams. Cloth. Pp. 582. Price, \$3.00 net. New York: William Wood & Co.

PERSONAL HYGIENE. Designed for Undergraduates by A. A. Woodhull, M.D., LL.D. First Edition. Cloth. Pp. 221. Price, \$1.00 net. New York: John Wiley & Sons, 1906.

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THE FORMATION OF URIC ACID *

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NEW HAVEN, CONN

The rôle of uric acid in physiology and pathology has long formed a theme for unrestricted discussion and controversy in scientific literature. The wealth of published contributions on this subject abounds in the most characteristic specimens of what a recent medical writer has aptly termed "truth and poetry about uric acid."

Nevertheless the student of the physiology of uric acid can not fail to recognize a number of distinct epochs representing the introduction of new discoveries and consequent altered points of view in the interpretation of familiar phenomena. When the secret of each novel attitude is revealed it no longer becomes difficult to follow the march of progress in science, and, what is all-important, we are thus enabled to revise or formulate anew the problems with the solution of which advancement is coincident.

This society, so happily inaugurated "for the diffusion of the knowledge of the medical sciences," will accomplish great good if its proceedings emphasize that before pathologic variations can be appreciated adequately, some fundamental knowledge of the normal functions of organs is essential. To the neglect of this, as a general rule, is due not a little of the confusion regarding the part played by uric acid in the animal body. Clinical observations, not infrequently confined to isolated cases or limited numbers, and more often carried out with inaccurate methods of research—the so-called clinical methods—have led to theories which were only reluctantly abandoned. Every investigator will admit that an hypothesis is a great aid to research in any domain, but a theory is admissible only so long as it fits the facts. Yet how difficult it is to relegate to the rubbish heap a theory which is supported by the authority of a distinguished worker. The present generation of scientists is learning to present truths eagerly, but to generalize from them with caution.

EARLIER VIEWS

The obstacles to scientific progress which I have just referred to are well illustrated by some earlier views on the origin of uric acid in the body. Since urea was recognized as an end product of the oxidative decomposition of proteids nothing was easier than to assume that the larger molecule, uric acid, represents a product of incomplete oxidation. Whether uric acid was regarded as an intermediate product in the combustion of the large proteid complex or whether it was, rather the out-

come of an abnormal or irregular disintegration change—in either event it seemed proper to attribute an increased occurrence of the compound to a disturbance in the usual oxidation of ordinary proteids. In clinical language the vague uric-acid diathesis became the expression of an equally vague lowering of the oxidative capacity of the organism. It was observed, for example, that leukemia is often accompanied by an increased output of uric acid in the urine, and at once the theorists attempted to associate this with an insufficient oxygen-carrying capacity of the circulating blood, in connection with a relative diminution in the number of erythrocytes. The increasing number of cases reported failed to show any constancy in the increase of uric acid excreted. When finally the crucial physiologic experiment of interference with respiration was made, no increase of uric acid was noted, and, above all, when the actual conditions in disease were experimentally investigated, it was found that leukemia is not attended with any deficiency in oxidative powers. With these negative results the structure of the old theory of the incomplete oxidation of proteid fell. How much would have been gained in this instance alone by a more inductive method of study.

My subject is restricted to one aspect of the physiologic problems concerning uric acid, namely, its formation in the body. How many erroneous ideas have arisen from a mistaken identification of the excretion of uric acid with its formation no one can say. So long as uric acid was looked on as one of the end products of nitrogenous catabolism the confusion was a natural one. We have, however, lately come to recognize this chemical compound as an intermediary product which may, in turn, experience ready decomposition within the body. With this once clearly recognized it is evident that the amount of uric acid eliminated within any given period is not necessarily any adequate index to that which has been formed within or introduced into the organism, and this statement applies independently of any undue retention to which attention has been directed so zealously by certain writers. The physiologist is to-day in a position to recognize the precursors of uric acid in the ingested foods or the disintegrating tissues and likewise to estimate with accuracy the quantities of these compounds which escape from the organism unchanged. And if the chemical and physiologic history of the intermediary transformations is not yet unfolded in its entirety, we can at least report commendable progress.

A review of early theories is unnecessary.¹ Manifest

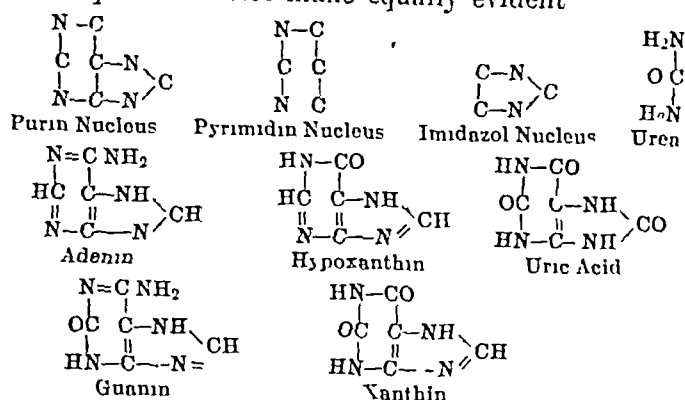
* Read before the Harver Society of New York at the Academy of Medicine.

¹ For a comprehensive review of the older literature on uric acid in physiology and pathology the reader is referred to the papers by Wiener *Ergebnisse d. Physiol.* 1902, vol. 1 part 1 1903 vol. 11 part 1 Barian and Schorr *Pflügers Arch.*, 1900 vol. lxxx 1901 vol. lxxxvii Walker Hall "The Purin Bodies of Food stuffs" 1903. No attempt is made in the present paper to give a complete list of the newer investigations only the more important references being noted.

experimental investigations have long since demonstrated the untenability of the view ascribing the origin of uric acid to a decomposition of simple proteids, in which it might arise as an antecedent of urea. Similarly the notion of attributing the production of uric acid to a diminished oxidative capacity in the body as a whole may be dismissed, although we shall see that certain greatly modified aspects of this view have again arisen in other connections. The more adequate, or what may appropriately be termed the modern conception of the formation of uric acid is associated especially with the researches of two investigators, Kossel and E. Fischer.

THE WORK OF KOSSSEL AND E. FISCHER

E. Fischer definitely established the chemical structure of uric acid and a large group of related compounds which have become familiar, through their physiologic and pharmacologic bearings, as the xanthin compounds, the alloxuric compounds or (more appropriately) the purin compounds. No physician can hope to have an adequate appreciation of the problems under discussion without some familiarity with the chemical structure of this group of related substances. The formulæ here presented therefore demands no apology, a superficial inspection alone reveals relationships which a page of description can not make equally evident.



Kossel's epoch-making contribution consisted primarily in his demonstration that the purin compounds, such as xanthin and hypoxanthin, are disintegration products of the widely distributed nucleoproteids, nucleins or nucleic acids. In one of his earliest papers, in 1881, recognizing the near chemical relation of the purin compounds to uric acid (see formulæ), he wrote "The thought is at once suggested that these compounds play a significant rôle as normal precursors of uric acid or urea. The difficulty involved in the recognition of this lies in the circumstances that these substances have heretofore been found in organs in small quantities only." Kossel² proceeded to show that the proportions of the different purin derivatives present in or obtainable from the body is far greater than had been anticipated.

The earliest experimental attempts which might have served to verify Kossel's hypothesis gave negative or uncertain results in almost every case. These failures are in part explicable in the light of subsequent study. A part of the difficulty is ascribable to inadequate analytical processes, a fact which is deserving of note at a time when the patient endeavors of the students of accurate analytical methods receive scanty appreciation from those who have no immediate use for them. Uric acid was at first missed as an end product of hypoxanthin-feeding, guanin-feeding and nuclein-feeding, partly owing to inadequate methods, in part probably because of poor absorption of the ingested materials, and more likely, further, because of the destruction of the formed

uric acid in the intermediary metabolism of such species (dog, rabbit) as were inadvisedly selected for the trials.

HORBACZEWSKI'S EXPERIMENTS

In 1889 Horbaczewski gave a new turn to the experiments and theories on uric-acid formation. To him was due the first experimental proof of the transformation of purin compounds into uric acid. By digesting organs like the spleen, rich in nucleoproteids, with blood, he obtained either the purin bases xanthin and hypoxanthin, or uric acid, according as his experiments were conducted in the absence or presence of oxygen. These experiments have become classic. But Horbaczewski made an equally important addition when he fed the nuclein prepared from spleen pulp and succeeded in eliciting an increased output of uric acid in both man and animals, thus transferring to the living body the experience gained in the digestion beaker.

Horbaczewski was unfortunate in the explanation which he gave for this new production of uric acid. He attributed it to the disintegration of nucleoprotein material, it is true, but he persistently refused to credit the increase to the purin-yielding substances ingested. Accordingly, he invented the theory of a leucocytosis induced by the ingested nucleoproteids, leading in turn to a breaking down of body cells,—leucocytes rich in the purin-bearing nucleic-acid groups. That the introduction of nucleic acids, either as such or as proteid salts (nucleins, nucleoproteids) may lead to an increased elimination of uric acid has since been demonstrated for many compounds of both animal and vegetable origin and in a considerable number of animal species, but the evidence is to-day abundantly in favor of a direct transformation of the ingested material without the intermediation of leucocytes. An increase in the digestive leucocytosis under this condition of feeding is the unusual rather than the usual occurrence, and the experience which I have gathered with my co-workers indicates that a characteristic metabolism of the purins follows the most diverse modes of introduction of the mother substances into the organism. Parenteral paths are equally effective.

THE PURINS AND URIC ACID

The failure of the earlier attempts to demonstrate in animals a conversion of ingested free purin bases, such as adenin, into uric acid, raised the question. Is some peculiar chemical complex or union like that of the nucleic acid molecule requisite for the conversion of the purins to uric acid in the body, or can the free purin bases be thus converted? For example, can guanin or adenin as such be transformed to uric acid, or is the characteristic oxidation dependent on the manner in which these purin bases are bound up in nucleic acid and such uric acid forming products as thymus gland? It is conceivable that hypoxanthin, for instance, might exert a leucotactic action such as Horbaczewski assumed for the nucleins, in that event the increased formation and destruction of leucocytes would presumably be accompanied by an increased elimination of liberated phosphoric acid. Krüger and Schmid³ have made these questions superfluous by demonstrating that even in man the ingestion of hypoxanthin, xanthin, guanin or adenin is followed by an increase in the output of uric acid. They have made clear that this phenomenon is in no

³ Krüger and Schmid *Zeitschrift für Physiol. Chemie*, 1902, vol. xxxiv, p. 549. Earlier observations on hypoxanthin were reported by Minkowski and by Burlan and Schur.

way the outcome of a leucotactic action of the free purin bases fed and that the phosphoric-acid metabolism of the body undergoes no noticeable alteration which would indicate any coincident destruction or synthesis of nucleic acid in the tissues.

With the genetic relationship between the purins of the food, whether in the form of the free hypoxanthin of meat extract or the nucleoproteids of glandular tissues like sweetbreads and liver once established, it is instructive to consider the quantitative relations between these two factors in metabolism. To what extent do the purins introduced contribute to the increased production and elimination of uric acid? When a balance is struck between the intake of purins, either free or combined, and the increase in output of uric acid in the urine as a measure of its production from the ingesta, a deficit is uniformly detected. It might be assumed that the purins fed are in part eliminated unchanged, indeed, it is well recognized that the urine contains other purin derivatives than uric acid. The quantity of these is, however, not appreciably or significantly altered by purin feeding except under unusual circumstances. A few actual figures will serve to illustrate the deficit to which reference has been made. Thus, in one case in man after feeding 1.2 gm of nitrogen in the form of hypoxanthin, 0.77 gm was recovered as excess of uric acid, or about 62 per cent, in the case of adenin 33 per cent was recovered as uric acid, and less than 4 per cent. left the organism unchanged.⁴

DESTRUCTION OF URIC ACID

The failure to recover the entire quantity of ingested purin in the form of uric acid or unchanged urinary purin suggests two explanations. 1, A retention of a portion of the purins or the uric acid formed therefrom so that they fail to reappear in the urine, or 2, a destruction of purins in the metabolic exchanges. The retention theory has been abandoned by almost all investigators except the followers of Haig, whose theories I regard as irreconcilable with modern experimental evidence. The question of the destruction of purins in the body, though foreign to the real subject of this lecture, nevertheless deserves brief consideration.

It has long been known that very considerable quantities of uric acid itself can be destroyed in the body. The evidence for this is made more convincing by the studies on various isolated organs in which this destruction has been investigated directly. For example, when blood containing a solution of uric acid is perfused through a surviving liver a progressive loss of uric acid takes place. The quantity of uric acid eliminated or found at any moment is therefore by no means an index to the quantity formed. The recognition of this fact, of the power of the animal organism to catabolize uric acid like other nitrogenous compounds, is one of the fruits of modern research which has profoundly changed our attitude toward the problems of purin metabolism.

The extent to which the destruction of uric acid and other purins actually takes place varies in different animal species. Burian and Schur⁵ have made an elaborate study of this subject and reached the conclusion that the proportion of the ingested purins which escapes destruction and is therefore eliminated as uric acid, is rather constant. In carnivora, like the dog and cat, it is about 1/20, in herbivora, like the rabbit, 1/6, and in man 1/2 of the purin material introduced. This explains why so little uric acid is ordinarily found in the

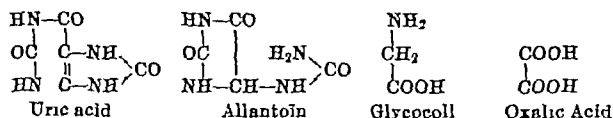
urine of the familiar laboratory animal, the dog, in contrast with man. It is furthermore probable that young animals are not equally capable of effecting the destruction of uric acid, and it is not unlikely to me that similar defects may be associated with pathologic conditions.

If we summarize these recent findings respecting the destructive capacity of the body for uric acid, a new point of view arises in the discussions of the so-called uric-acid diathesis. Uric acid formed in the body is ordinarily largely destroyed in the body again, it may therefore occur in unusual amount owing to diminished destruction equally as well as it might accumulate through imperfect elimination or increased production. The important point is that a study of the urine alone will not decide. The tolerance of the organism for purins must be ascertained by a comparison of the intake.

What are the end products of this destruction of uric acid in the organism? Urea is at once suggested by the mere inspection of the structural formulæ. The

possible formation of oxalic acid

in the same reaction is also thus brought into view. In the carnivorous dog and cat the observations of Salkowski, Minkowski, Cohn and the work in our laboratory, have indicated that allantoin represents an important transformation product of uric acid and is glycocoll. The chemical relationships involved are made clear by the comparison of the structural formulæ



The current views regarding the relative formation of these compounds under different circumstances are still divergent and a discussion of them at this time would be unprofitable.

The review which has been presented up to this point has traversed the paths familiar to every student of this subject. At most the changing ideas regarding the origin of uric acid have been pointed out. The distinctly modern aspect of the problem concerns the mechanism by which the metabolism of the purins is effected—the chemical history of the reactions which yield uric acid from nucleoproteids, and in turn cause its disappearance.

ENZYMES AND PURIN METABOLISM

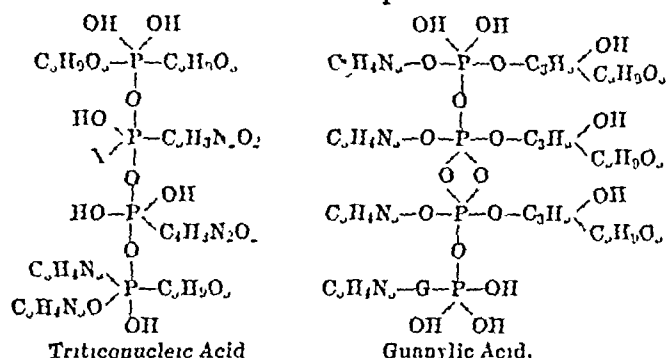
That a preponderating rôle is played by soluble enzymes is no longer a matter of conjecture, nor is this anything other than what the increasing knowledge of the importance of these biologic agents would lead us to anticipate. Enzymes are no longer thought of exclusively as agents of the digestive apparatus, they enter everywhere into the manifold activities of cells in almost every feature of metabolism. Hydrolysis and oxidation are facilitated by their participation in definite, conceivable ways. Horbaczewski's⁶ observations on the formation of uric acid *in vitro* from the purins of spleen pulp formed the starting point for the new departure. Spitzer⁷ then demonstrated that extracts of spleen and liver may yield uric acid when air is present, even in the absence of putrefactive processes, thus indicating the enzymatic character of this reaction. He also shows

⁴ The data are taken from Krüger and Schmid. Loc. cit., p. 559.
⁵ Burian and Schur. Pflügers Arch., 1901, vol. lxxviii, p. 1.
 Cf. also Krüger and Schmid. Loc. cit.

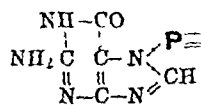
⁶ Horbaczewski. Monatsb. f. Chemie, 1891, vol. xii, p. 100.
⁷ Spitzer. Pflügers Arch. 1899.

that uric acid can be obtained in an oxidative way from adenin and guanin by the action of some constituent of spleen or liver extracts in the presence of atmospheric oxygen, although the formation of uric acid is far more extensive when xanthin and hypoxanthin are the precursors. These results were confirmed by Wiener,⁸ and the facts which they represent are now undisputed.

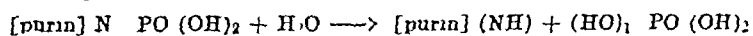
The additional contributions of Schittenhelm⁹ and Jones¹⁰ have established the co-operation of several enzymes in the steps leading to uric acid as an end product. The first of these involves a nuclease, that is, an enzyme capable of splitting up nucleic acid so as to liberate the purin bases present in its complexes. The constitution of the nucleic acids is by no means determined, although the researches of Osborne¹¹ and of Bang¹² enable one to obtain some conception of the possible relationship of the purin derivatives to the remaining radicals as indicated in the provisional formulae



Burian¹³ has lately given reasonable evidence that the purin groups are attached to the remaining nucleus at the 7-position of the purin skeleton, so that guanin, for example, would be attached to the remaining groups as indicated below



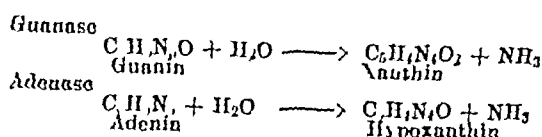
In chemical terms the action of the enzyme nuclease would thus be comparable with the reaction involved in the hydrolysis of an acid amide



Nucleases are doubtless widely distributed in nature. They must obviously share in many autolytic processes in organs and tissues. At present, however, our information regarding this class of enzymes is rather limited.

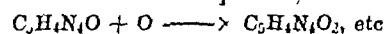
More light has been thrown on a second step in the intermediary metabolism of purins. Several investigators, notably Jones¹⁰ and Schittenhelm,⁹ have succeeded in isolating enzymes of the amidase type which accomplish the conversion of the amino purins, guanin and adenin into xanthin and hypoxanthin, with liberation of ammonia.

Reactions of this kind, attributable to enzyme influence, have long been recognized and assumed to have importance in the deamidizing of nitrogenous compounds in metabolism.¹⁴ For the cases under consideration the reaction may be assumed to proceed as follows

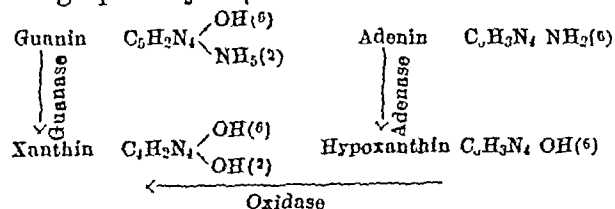


In correspondence with this, adenin and guanin are converted into hypoxanthin and xanthin, respectively, when they are digested with extracts of certain tissues. An interesting controversy has arisen in the study and developed into more than polemical interest. Having obtained extracts of organs which readily deamidize adenin without converting guanin, Jones very properly postulated the existence of two distinct amidases—guanase and adenase. Working with the same organ (the spleen), Schittenhelm has failed to note any such distinctive difference. The discrepancy has lately been cleared up by the discovery of Jones,¹⁰ that whereas the spleen of the ox (with which Schittenhelm experimented) contains guanase, it is missing in that of the pig (which formed the source of Jones' experimental material), and the latest experiences of Schittenhelm¹⁵ and of Pfeiffer¹⁶ add to the growing conviction that the distribution of the enzymes concerned in the metabolism of the purins is very unlike in different species. Future studies in this field will doubtless contribute many features of interest in comparative physiologic chemistry.

That these enzymes are not universally distributed in all organs and tissues is certainly not without physiologic significance. Up to the present adenase and guanase have been found in the spleen, liver, lung, muscle, thymus and suprarenals, not in the intestines, blood or kidneys.¹⁷ When tissue extracts prepared from spleen, liver, muscle or lung are allowed to act on guanin or adenin in the presence of oxygen, uric acid is found in place of xanthin or hypoxanthin. In this reaction a third enzyme, an oxidase, is involved, converting hypoxanthin to xanthin and subsequently to uric acid.



Under favorable conditions the conversion may be practically complete. The first step in these reactions may be graphically represented as follows:¹⁸



The final step is the oxidative transformation of xanthin into uric acid. I am unable in the allotted time to give appropriate recognition to the various investigators who have at length enabled us to trace in some comprehensible way the intermediary changes by which the purins and their nucleic precursors may give rise to uric acid, nor am I permitted to do more than refer to the work of Wiener, Ascoli, Schittenhelm and others,¹⁹ in which the destruction of uric acid by the agency of uricolytic enzymes has been found conspicuous in the kidney and liver, and in lesser degree in extracts of muscle and bone marrow. The sequence of events in the transformation of purins is bound up in a series of typical enzyme reactions.

(To be continued)

8 Wiener Arch f Exper Pathol u Pharmac, 1899, vol xiii, p 373

9 Schittenhelm Zeitst f Physiol, Chemie, 1904 vol xiii p 251, vol xiiii, p 228, 1905 vol xlv, p 121, vol xlvi p 354

10 Jones Ibid, 1905, vol xlv, p 84, and earlier papers therein mentioned

11 Osborne and Harris Ibid 1902, vol xxxvi, p 85

12 Bang Ibid, 1901, vol xxxi p 411

13 Burian Ergebnisse d Physiol, 1904, vol iii, 1, p 90, John son Amer Chem Jour, 1907, vol xxxiv p 197

14 Cf Lang Hofmeister's Beitr z Chem Physiol, 1904 vol v, p 321

15 Schittenhelm Zeitst. f Physiol Chemie 1905 vol xlvi p 354
16 Pfeiffer Hofmeister's Beitr z. Chem Physiol, 1905, vol vii p 463

17 Schittenhelm Zeitst. f Physiol Chemie, 1904, vol xiii, p 236

18 Jones Ibid 1905 vol xlv p 2

19 Schittenhelm Ibid, 1905 vol xlv pp 147, 161, Almagia Hofmeister's Beitr z. Physiol Chemie, 1905, vol vii p 469

MARCH 24, 1906

EYE-STRAIN AS A CAUSE OF DISEASES OF THE DIGESTIVE ORGANS

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Before the Section on Practice of Medicine of the American Medical Association,¹ in 1905, the then president of the association, the professor of medicine in the medical department of an old university, read these words

NONGASTRIC ORGANIC DISEASES PRESENTING GASTRIC SYMPTOMS

The Eyes—The subject is familiar to all. Who has not seen correction of errors of refraction relieve so called "bilious attacks," periodical vomiting, anorexia, indigestion and other gastric symptoms? The cure of grave organic ocular defects relieves similar gastric conditions.

A good-sized book, with no superfluous word, might be written concerning this astonishing admission, for 1 Every statement made is true 2 Every statement made is untrue 3 Its significance is wholly unrecognized and far-reaching 4 The history and due credit-giving are unjustly ignored

1 Supposing that the thing intended to be said is really said, we have here an authoritative assent and reaffirmation of the truth that eye-strain frequently produces "bilious attacks," periodical vomiting, anorexia, indigestion, and other gastric and intestinal diseases. It is now sixteen or seventeen years since I began to affirm and to reaffirm this truth, and this is the second convert made among the diagnosticians, leading practitioners or gastrologists. Hereafter I can merely refer critics, sneerers, ignorers and deniers to Dr. Musser, ask them to settle their scores with him, and sing my "*Nunc dimittis*" with a smile of cheery satisfaction. No longer is it a question of the opinion of a "specialist," an "enthusiast," an "exaggerator," a "hobby-rider," a "grinder of his own axes," etc., but the president of the largest American medical society, the professor of medicine in a great medical college, and the leading diagnostician and practitioner in a large city, has spontaneously and publicly stamped the theory with the approving seal of his authority. There is abundant clinical evidence of the correctness of the intended statements of Dr. Musser in the paragraph quoted, and any practitioner can verify it in his practice by numerous patients whenever he will refer them to competent oculists and follow the histories up for a few days, a few weeks or a few months. In this instance it is not for the affirmer to prove his statement. Any man who makes such an assertion as this and especially one occupying the position of authority and power held by Musser, is perfectly aware of the reach and significance of his published opinion. He has, beyond question, demonstrated it long and often, or he would not dare to come out so plainly and without equivocation. It, therefore, behooves the deniers, ignorers and cynics—the so-called "conservatives"—to prove their negation, because, by every moral and medical law, all patients continued in their sufferings by this "conservatism" may justly, and should legally, hold the deniers, ignorers and cynics criminally responsible. We hold the antivaccinationists accountable for every case of small-pox and it is proverbially "a poor rule that will not work both ways."

How many deaths are chargeable to the prejudices of Hodge and Meigs and their blind adherents who opposed

the clear logic of Oliver Wendell Holmes? And when the error-loving and truth-hating opponents and rivals of Semmelweis ruined him professionally and allowed thousands of their patients to die they were likewise responsible. Since now a great man has authoritatively announced the frequent dependence of diseases of the digestive organs on eye-strain, those who continue their policy of not giving their patients the possibility of cure by the method suggested must settle with avenging science and the medicine of the future. They can no longer continue the pitiful and silly cry of, "Danger, danger in such extremism," with which they and their commercial medical journals have met the demands of progress in clinical medicine.

2 It is a pity that the method of making the announcement of the paragraph was not itself beyond criticism. There is a perfectly well understood and admitted meaning of the term "organic disease." In the paragraph-title, "Nongastric Organic Diseases," etc., this definition is contravened and mystified. Amblyopia is not an organic disease. The eye with the low and common errors of refraction is in no way morbid or diseased, least of all is it organically diseased. Only by secondary endeavors to overcome the malfunction of the ametropic eye does organic disease somewhat rarely arise, either in the eye itself or elsewhere. In the vast majority of cases the attempt to overcome the error—called eye-strain—is purely functional. In the same way, in the last sentence of the paragraph, the repetitive misuse of the term is followed by the words "similar gastric conditions." But the gastric, intestinal and pelvic consequences of eye-strain are at first, and for long purely functional. As long-continued functional disorder is bound to end in organic disease or anatomic pathology, so here, also, these functional disorders of digestion may finally end in inflammatory and surgical disease.² But a wiser discrimination should have guided in the making of the pronouncement.

The motive may have been excellent which prompted the writer to say, "The subject is familiar to all. Who has not seen," etc.? But method is often almost as important as motive, and in this instance it is doubly or trebly so. If it is correct to say that the subject is "familiar to all," etc., then those who show wilful ignorance of it, those who deny and scoff at it, those who do not bring the possibility of the therapeutic test to their patients—what shall be said of them? Is there any word too denunciatory, any expletive too strong, as applied to one who has seen, often and "familiarly" seen, the relief of eye-strain end bilious attacks, vomiting, anorexia, indigestion and other similar symptoms, and yet who wholly ignores the fact in his published books and articles, who does not act on the suggestion in the treatment of his patients, who scoffs at all reflexes and who publicly laughs at all such nonsensical theories and theorists. Without the "if," I do not myself call them miscreants and scoundrels—I only ask, if it is so, is it not scoundrelism? The authority implies plainly that all physicians have seen such cures are familiar with them, know them to be genuine and true—and yet, well, let us glance at the literature! We must remember that there can not be less than one-third of the persons of the civilized world who are suffering from some of these enumerated symptoms and their sequels. There are

2. This is so true that a great surgeon publicly states that his most brilliant cures of threatened operation appendicitis, peritonitis and other surgical diseases of the pelvis have been made without operation, and by sending his patients to the oculist.

several hundred millions of such civilized persons, and hence, admittedly, and at the lowest calculation, there must be a score or two of millions suffering from digestive disorders due to eye-strain. Everybody, plainly implies Professor Musser, is familiar with and admits the fact that the correction of eye-strain gives relief in many cases of gastric and intestinal disorder. Well, if so, why do they not say so and report cases publicly? What kind of familiarity and science is that which is carefully excluded from all publication and open admission? It is, of course, sham familiarity, unscience, nonsense.

First as to the text-books, treatises and monographs on diseases of the stomach or of digestion.

BOAS, 1897, "*Diagnostik und Therapie der Magenkrankheiten*," does not mention the eyes as possible cause of stomach diseases.

BOAS, 1901, "*Diseases of the Intestines*" (translation of Basch), is likewise oblivious of the "familiar" fact.

COHNHEIM, 1905, "*Krankheiten des Verdauungsapparates*," if "familiar" ignores the theory utterly.

DEBOVE and ACHARD, 1895, and DEBOVE and REMOND, 1893, "*Maladies de l'estomac*," also seem unfamiliar with this theory.

EINHORN, 1903, "*Diseases of the Stomach*," "has not seen," etc., or, if he has seen, has not spoken of the matter.

EINHORN, 1904, "*Diseases of the Intestines*," utterly ignores the well-known theory and facts that support it.

FLEINER, 1896, "*Krankheiten der Verdauungsorgane*," would probably agree with the German ophthalmic surgeons in pronouncing such nonsense *Amerikanische Humbug*.

FRENKEL, 1900, "*Maladies de l'estomac*," should come to Philadelphia and study the subject more thoroughly before he writes again. He wholly ignores the theory.

HEMMETER, 1902, "*Diseases of the Stomach*," should revise almost every page of his treatise if Professor Musser is correct. He has not heard of the theory.

HEMMETER, 1902, "*Diseases of the Intestines*," inferentially denies both the facts and the familiarity. He is still silent.

KAHANE, 1900, "*Therapie der Darmkrankheiten*," is a sorry teacher if he has seen and is familiar with such facts.

MATHIEU, 1900, "*Maladies de l'estomac*," writes strangely if he knows the rôle that eye strain plays in those maladies, for he does not speak of it.

MARTIN, 1895, "*Diseases of the Stomach*," is equally to be criticised.

PICK, 1895, "*Magen und Darm Krankheiten*," does not allude to the affair.

RODARI, 1904, "*Magen und Darm Krankheiten*," wrote too long ago, probably, to have heard of facts which in 1905 are "familiar to all."

SOUPAULT, 1905, "*Maladies de l'estomac*," does not agree that "all" should be construed as including French physicians.

VAN VALZAH, 1898, "*Diseases of the Stomach*," omits all reference to this source of gastric diseases.

WEGLE, 1905, "*Magen und Darm Erkrankungen*," is also not to be included among the "all."

Of all the recent text-books on gastric and intestinal diseases that I could find in the library of our College of Physicians, the 18 mentioned do not contain any reference whatever to what Dr Musser says is admitted by all. I have found two, however, who do refer to it. The first is

Reed, 1904, "*Lectures on Diseases of the Stomach and Intestines*," under the heading, "*Acid Gastric Catarrh*," p 825, has these inciting, powerful and emphatic words: "The oculists include eye-strain among the possible causes." And we learn beyond consolation, to know what "oculists" so include," and where the references may be found.

The second is

Herschel, 1895, "*Indigestion*," under Reflex Causes, p 44, this ignored teacher does not ignore and includes himself among the "all." He writes

"A considerable amount of attention has been paid of late to the possibility of gastric affections being set up reflexly by eye strain. George M Gould, in a paper published in 1890 in the *International Journal of the Medical Sciences*," stated that he had found that in the young of either sex eye strain, to a considerable extent, often interfered with the digestive process. My own experience bears this out, as I have had in my own practice several cases in which digestive troubles appeared to depend on astigmatism. One patient in particular, a chemist in the city (London), a highly neurotic individual, used to suffer from great flatulence during the morning hours. I discovered that he was astigmatic, that he lived out of town and read a paper coming up in the train. He informed me that the flatulence invariably came on as soon as he commenced to read the paper in question. The gastric troubles promptly disappeared as soon as he discontinued reading on his way up to town."

Thus eighteen out of twenty recent systematic treatises on diseases of the digestive organs completely ignore what a great authority says is a well-known and highly important cause and cure of such diseases, one smiles at it in a line, and one devotes to it a half-page—with sympathy and respect, President Musser should gladly note.

How is it with the systematic practices of medicine? A highly important cause, known of all, of a vast number of cases of disease, and the means of speedy cure, should, of course, be extensively and minutely set forth and emphatically urged on the attention of the students and practitioners who receive the teachings of the great scientists and instructors. I have examined carefully the following "Systems," and "Practices," and "Manuals," and Text-books: Leo, Allbutt, Mathieu, Ewald, Nothnagel, Debove and Achard, Anders, Bain, Bouchard and Brisseau, Brouardel, Hare, Bartholow, Hughes, Klemperer, von Mering, Monro, Osler, Salinger and Kalteyer, Tyson, Gibson, Butler, Hare, Kuhneman, Lyon, Cohen and Eshner and others.

Why do they entirely fail, even in that old foolish allusion, that is meant to be illusion, in the reference that refers nowhere, the indexing that demonstrates the author's omniscience, but also his total unconcern?

But even here the rule has its exceptions, and some unmentionables may be mentioned.

Allchin, vol v, p 235, wrote in 1903: "Not a few cases of nervous dyspepsia may be traced to causes acting reflexly, especially pelvic disease, and even, it is asserted, to eye-strain and astigmatism."

French, 1905, has one or two similar strabismic allusions.

Da Costa, 1900, refers to it still more gingerly.

Hare, 1905, "*Practical Therapeutics*," generously allows two lines to the subject: "Eye-strain may cause stomachic disturbances, flatulent dyspepsia and a variety of general or so-called reflex neuroses."

Musser, 1904, "*Medical Diagnosis*," is not so generous concerning a factor of great importance in 1905, and one "familiar to all." He allots one word to it.

"Gastric neuroses may arise directly from disease of the stomach or reflexly from disease of other organs, the brain, the spinal cord, uterus, kidneys, liver, eyes or nose."

It is good to know that the eyes are the seventh in order of importance, and are listed before the eighth, the nose—a righteous nosology, one might add.

Loomis-Johnson, 1898, "*System of Practical Medicine*," under "*Intestinal Neuroses*," vol iii, p 111, article contributed by Stockton and Jones, say

3 The conjugation of these two words as is most common shows that the writer has not a faint conception of the real nature of "eyestrain."

MARCH 24, 1906

"One of the most prolific causes of functional gastric disturbances is eye-strain, and almost any neurosis may be induced by it. Gastric hyperesthesia, accompanied by hyperchlorhydria, to be followed later by more or less anesthesia and achlorhydria, seems to bear a definite relation to astigmatism of high degree. Without attempting to refer the condition to any special form of eye-strain, we have, nevertheless, been impressed with the frequency of the association of astigmatism and muscular imbalance with painful sensory conditions of the stomach, especially taking the form of distress and pain accompanied by belching after meals, with a good appetite, but voluntary starvation through dread of pain induced by eating. These patients suffer for years and are made rather worse than better by restricted diet."

Stockton, 1903, in "Nothnagel's System," American edition, article on "Diseases of the Stomach" (not in the original), comments, p 163, as follows

"Cases of so-called typical gastric vertigo not infrequently depend on uncorrected eye-strain, especially on anisometropia. It is true that the attacks are often precipitated by transient disturbances in digestion, and these digestive derangements in turn may be occasioned by some eye-strain that predisposes to the vertigo. In several instances I have seen the disappearance of both vertiginous and gastric symptoms follow a careful and painstaking correction of the refractive error."

Again, under "Gastric Neuroses," p 256, he says

"As earlier stated, eye strain has been found a frequent cause of functional stomach trouble, especially among those who are living an indoor life and are accustomed to the close use of the eyes. This is particularly true in cases of mixed astigmatism and anisometropia, and is often associated with muscular imbalance."

Dr Stockton has also placed himself on record more definitely and fully in the same way in an article entitled, "Hygiene of the Digestive Apparatus," in Dr Pyle's "Personal Hygiene," issued in 1904

Of the thousands of articles, clinical or pathologic, by physicians, that in the last dozen years have appeared in the medical journals on the subject, it may be said that, in all probability, not one has recognized or emphasized the truth set forth by Dr Musser in the few lines quoted. It is needless to enumerate. A typical example comes to hand as I write, a solemn address by Robert Hutchinson* on "Dyspepsia." Like a multitude of others, filled with light but not in the least enlightening, it is utterly oblivious of the eye-strain origin of this most common of modern diseases. No F.R.C.P. would dream of allowing such a thought to appear or even to be mentioned by him in a public way.

Thus, with the exception of one or two brief allusions in the authoritative text-books, the "scientific" medical men of the world give no hint of their "familiarity" with a highly important source and cure of the most common of all diseases. Plainly, therefore, Dr Musser is in error as to the knowledge of the fact by medical men. This error clearly arises from the attempt to promulgate a scientific truth by a method which shall ignore the history of the discovery and "save the faces" of those who have wilfully ignored the truth discovered and fought for by others. This may be good politics, but it is unjust and the question remains: Will it stop the ignoring and the sneering of the "conservatives?"

If as Dr Musser avers, eye-strain known of all, is responsible for a large share of the disorders and diseases of digestion and nutrition, the oculists especially of the United States should long ago have received the truth eagerly and should have proclaimed it loudly from the housetops and from their text-books. It is needless

to say that it is not so. I need not weary with all the negative citation of authors.

If the truth of Dr Musser is true, the refractions of our oculists were the means of demonstrating the truth. So far as I know, only one such oculist has publicly confessed.⁵ Concerning sick headache or "migraine," many have done so, and in other essays I have given the details, quoted the writers and established the question of priority. Sick headache, however, is not the subject now under discussion. Although that disease consists in the most profound and revolutionizing morbidity of the digestive process, it presents, in the main, a different clinical picture from that of "bilious" attacks, periodical vomiting, anorexia, indigestion, and other gastric symptoms described in the quotation taken as a text.

3 The significance of Dr Musser's statement is not recognized, and its far-reaching consequences not discriminatingly appreciated. If it is true, then the professional and the social bearings are tremendous. It may be seen at once that the practices of nearly all physicians must be thoroughly changed in the majority, or in a large minority, of the patients consulting. Not even the specialists can be excepted, because where one will, do not the majority of diseases spring directly from the disorders and diseases of digestion and nutrition, or are intimately based on or associated with them? How large a portion of the drugs advertised are directly or indirectly aimed at those conditions? What is the whole nostrum, patent and proprietary medicine business but the organized attack of quackery on the demons of "dyspepsia" and denutrition? Seventeen or eighteen years of clinical observation and study have convinced me that a far larger proportion of all gastric and intestinal diseases are due to eye-strain than even Dr Musser and Dr Stockton would admit.

4 If I am in error, I shall be happy to be corrected, but I think I have not mistaken when I say that the recognition of the truth of the ocular origin of these diseases of digestion was begun, and for ten or a dozen years was advocated, solely by me. I care nothing personally for questions and quibbles as to priority, but I am proud of the fact that I early and long and boldly set the truth forth, and have held to it, at first in face of the silence of all others, then in spite of their ridicule and jeers. I began the crusade in 1888, publishing my first clinical report early in 1889⁶ of a case of dyspepsia of twenty years' duration cured at once by glasses. I considered attentively the clinical details and the physiologic grounds of the morbid function, its cure, etc. In January, 1890, I again gave the details of other cases, and stated that I had had in all twenty-eight patients in whom dyspepsia, anorexia, nausea, etc., were cured by the extinction of eye-strain. Later, in the same year,⁷ I again returned to the charge, giving proofs and repeating the conviction that "eye-strain produces digestive troubles of various kinds, all resulting in malnutrition, anemia?" etc.

In 1891,⁸ I reported on 277 cases of digestive and assimilative disorders (anorexia, fickle appetite, consti-

5 After the above words were written a second noteworthy exception comes to my hand the article of Dr Griffin in THE JOURNAL of the A. M. A. Jan 6 1906 Under Disorders of Eye-Strain" this frank man publishes reports of cases diseases of the digestive organs due to eye-strain and cured by ocular treatment. All honor to him.

6 Medical and Surgical Reporter Feb 9 and March 9 1889

7 American Journal of the Medical Sciences

8 Medical News Aug 23 1890

9 THE JOURNAL A. M. A., Sept. 19 1891

pation, dyspepsia, nausea, vomiting—not sick headache—car-sickness, etc.), and I wrote thereon

"For a long time I have been begging my friends, the general practitioners, to heed the fact that digestion and assimilation may be directly and profoundly disordered by eye-strain. Nothing seems more true in medical science than this"

And much of the same purport

Since then I have continued nearly every year to beg consideration of the fact. Not an oculist published a line of assent or seconding. At last I convinced a few of my friends in general practice, especially one great physician of national fame, by the best of demonstrations—the restored health of patients. The misfortune of the theory consists in the self-evident fact that the cures depend on an accuracy and refinement of practical refraction which has been almost impossible and unknown and which is now only becoming more general

The manner in which the recognition of the truth is coming about illustrates so admirably the ancient psychologic way that it should be noted. Years of utter silence and ignoring follow a discovery and the repetition or re-emphasis of it by the foolhardy. Then follow ridicule, calumny, coarse dogmatism and stupid opposition of the leaders who do not lead, the authorities who are without authority, the editors who sell themselves to the *Zeitgeist* or to their commercial salary-givers, the indifferent multitude who follow blindly the blind guides. Finally, one after another acknowledge the truth, long evident to many, impossible longer to be slandered or ignored. But the distinguishing characteristic of the confession is that it is "familiar to all" and admitted by all, but still persists the death-like silence as to how the discovery was made, by whom recognition was made necessary. There is not a hint of gratitude to those who have sacrificed themselves in the cause of truth and discovery. Instead it is said "It is familiar to all," "That is an old story," "We have always said so"—and then is renewed the custom of ignoring and maligning the new and different truth that, in its turn, is struggling for a chance to release other millions from their sufferings. "Conservatism" may be most expensive and criminal when it conserves only error.

There remain several important postscripts to be carefully considered

1 It is evident that a breach has been made in what seemed the impenetrable walls of the professorial and authority-making classes. Heretofore all students of history and psychology have found that the real discoveries in medicine are ignored, scorned and opposed by the contemporary "authorities," the leading practitioners, the professorial and presidency seeking, the committee-forming, and the text-book-making class. Some of the men composing this class are too often too far interested in themselves, their own personal success and fame. Some are seeking to hold their dearly gained and slippery power, too occupied in courting popularity, hunting LL.D. degrees, baronetcies, trusteeships, other professorships and presidencies, too desirous of doctoring the rich and those dying of organic disease, to have care for the functional diseases which, long neglected, at last land the prematurely dying in the hands of the famous consultants.

2 The question returns as to the sincerity, the effective-making and the permanency of the admission. And, first, as to the sincerity. In Dr Musser's own text-book of last year's dating, there is but one word

out of hundreds of thousands devoted to the matter "familiar to all." In his own article from which I quote, there are some 1,400 words, of which 40 are devoted to a mere statement concerning the ocular "nongastric diseases." In the discussion of Dr Musser's paper there were 14 participants. Their opinion of Dr Musser's "familiar to all" admission was shown in the fact that not one considered it worth even alluding to. Now, if this is a truth of value, the matter needs to be set forth in a discriminating and serious manner. We must have the rules of diagnosis to determine the methods whereby eye-strain sets up those symptoms and how certain kinds of strain beget certain digestive diseases. We need more than all the proofs that these general practitioners and gastrologists have cured these patients. Let the cases be reported. The editors of the great official organs of their societies will print such articles from these great men, but they often refuse to do so when the little men and the hobby-riding oculists send their manuscripts.¹⁰ The editors are great friends of the "authorities." The truth is, of course, that the glittering generality, the general and vague admission, is not taken seriously, nor is it meant to be so taken.

The "familiar to all" vagueness is merely a sop thrown to Cerberus and a method of "saving one's face," so that in future years, when the despised "enthusiast and exaggerator" shall have died in establishing the contemptible truth, then those who have killed him (and their patients) by the "damning with faint praise" may proudly say, "We knew all this a generation ago and urged it and practiced it."

3 But did they know and practice it? If so, the proceedings of the great societies of oculists (through whom alone the truth could be demonstrated) and the ophthalmic text-books must show the thousandfold proofs of the theory of eye-strain as a cause of gastric diseases. With dreary monotony they absolutely omit such proofs and go on to discuss the cure not the cause of ocular tumors, inflammatory and surgical diseases. Of refraction problems and gastric diseases there is no curiosity or mention.

How is it in practice? Will Dr Musser's colleagues, the great professors and text-book makers, see to it that the eyes of these patients have been accurately "glassesd?" Will the leading diagnosticians and practitioners of New York, London, Paris, Berlin, Boston, Chicago, San Francisco, Philadelphia, Baltimore, New Orleans, and the rest, when a patient comes to them next week, seek to learn if there exists eye-strain? If they do this will they do more than to ask in an in-curious and humdrum way "Have you been wearing glasses?" If they get a reply, "Yes, from a good eye specialist," will they rest unsatisfied? Do they care to go into the matter earnestly, scientifically? Do they seek to know that, as a rule, the greater the reputation of the "ophthalmic surgeon" the more certainly will his prescription of lenses be wholly inaccurate and wrong? Will they seek to learn that there are some 100 good and sufficient reasons why the glasses worn by patients generally are unscientific and incapable of relieving eye-strain? "Familiar to all" may be an astute (or blunderful (?)) way of rendering a truth unfamiliar to any.

¹⁰ At the same time the editor of the British Medical Journal accepted the MS of Hutchinson referred to he refused an excellent article from an English oculist showing the dependence of "dyspepsia" on eyestrain.

4 The admission, "familiar to all," may be worse than continued silence and scorn. About thirty years ago a leading practitioner wrote several articles admitting most that "the eye-strain crank" could wish, logically implying all that he now claims and giving excellently reported clinical demonstrations. He soon saw that the professional mind could not, and would not, take in the truth. It was ignored utterly and contemptuously. The promulgator realized his error and joined forever the ranks of the ignorers. About thirty-four years ago an American oculist, known of all, stated the clear truth that sick headache is caused by eye-strain. From that day to this, if I am not in error, he has never dared to repeat the hazardous admission or even to allude to it. Thus it may be seen that there are good reasons for suspecting that political shrewdness and tactical acumen often have to do with hindering the progress of medicine, and that a cunning selfishness may require that thousands of patients should continue to suffer rather than that the truth should be preached, a truth which medical dogmatism may not allow to prevail.

THE DIAGNOSIS OF RENAL CALCULUS *

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Few diseases present such protean symptoms and simulate such a varied array of other maladies as stone in the kidney. This is particularly true if we include in our considerations stone in the ureter.

The smallest stone may cause typical agonizing symptoms not easily mistaken even by the patient, while without attracting notice large stones may occupy both kidneys, causing insidious destruction of these organs and sudden death from anuria. In the consideration of this subject I will first discuss the diseases of the kidney which we must differentiate from calculus nephritis, and will then take up those diseases of neighboring organs which most commonly mislead us in diagnosis.

COMMON KIDNEY DISEASES TO BE DIFFERENTIATED FROM CALCULUS NEPHRITIS

The more common kidney diseases of which we must always think in making a diagnosis of stone are tuberculosis, pyelitis, pyelonephritis and pyonephrosis from the ordinary pus-producing infections, tumor and intermittent hydronephrosis.

Tuberculosis—At our Atlanta meeting, two years ago, I had the pleasure of reporting thirty-five cases of tuberculosis of the kidney occurring in the practice of Dr. Howard A. Kelly and his associates in Baltimore. It had been my privilege to study the urinary condition in most of those cases, and you may remember that I laid emphasis on the importance of urinary examination in making a diagnosis of renal tuberculosis. The same law holds in renal calculus—we must study the urine.

Our only positive diagnosis of renal tuberculosis is the finding of tubercle bacilli in the urine or causing the disease in guinea-pigs by the inoculation of the urine or the diseased tissues taken from the bladder. In calculus kidney the urine may show sand or a stone. The x-ray and the wax-tipped bougie are invaluable means for making a positive diagnosis, but these methods both fail at times and if we would enjoy a full measure of success in kidney work we must insist on a careful study of the

urine. Blood occurs in the urine in both stone and tuberculosis. The amount varies in both diseases from microscopic quantities requiring both the centrifuge and microscope for the discovery of the few corpuscles present, to severe hemorrhages threatening the patient's life. The amount of blood is more likely to be influenced by exercise in cases of stone, but we sometimes have to search repeatedly before finding a few corpuscles, marking the only change in the urine. Pus in the urine, at least in microscopic quantities, may always be looked for in tuberculosis, while a large percentage of stone cases are aseptic and free from inflammatory reaction, especially in the early stages, and leucocytes, if present, can be accounted for by the amount of blood. I have found that some stone cases with only a moderate number of red corpuscles and leucocytes may have a strikingly large number of epithelial cells.

Pain as a differential symptom between stone and tuberculosis is unreliable. In either case there may be entire absence of pain. Either disease may cause only a dull backache or an indefinite nagging sensation in the lumbar region. In either disease the pain may occur in the most severe paroxysms due to blocking of the ureter by a blood clot, by a plug of detritus or in calculus disease by a stone. At such times the kidney is likely to be enlarged and the urine may be temporarily clear.

Palpation findings in the kidney region are not characteristic, as in either disease the kidney may be smaller than normal because of atrophic sclerosis or it may be greatly enlarged from fibrosis, lipomatosis, hydronephrosis or pyonephrosis. Palpation of the ureter is of more value, as a large proportion of the tuberculous cases show thickening of the ureter after the disease is advanced in the kidney. In the infected stone cases the ureter may be thickened and simulate the tuberculous ureter. In ureteral calculus the stone is in the lower end of the ureter in 50 per cent of the cases, and in women it can usually be palpated through the vagina or the rectum. In diagnosing a case as tuberculous on the evidence of finding acid-fast bacilli in the urine, we must always use the differential stain, as illustrated by the following case.

CASE 1—Mrs. J. B. S., aged 42, married seventeen years, the mother of two children, was admitted to Dr. Kelly's service at the Johns Hopkins Hospital in 1901. The patient had complained at intervals for the past four years of attacks of intense pain in the right lumbar region. She described the pain as labor like in character, and said that it extended downward toward the bladder and down the thigh as far as the right knee. The attacks lasted from twenty-four hours to five days. At times they were accompanied by chills, nausea and vomiting and constipation. During the attack the patient passed but little urine, but had the constant desire, and after the attack a large quantity of urine was noticed. She sometimes had decided blood tinge in the urine during and after the attack. She never passed gravel. There was always sensitiveness in the right hypochondrium during the attacks. The patient came to Dr. Kelly with a diagnosis of renal tuberculosis, a report having been made from a state laboratory that tubercle bacilli had been found in the urine in abundance. Leonard, of Philadelphia, one of our most expert Roentgen ray specialists, had failed to get a stone shadow. I examined catheterized specimens of urine without finding pathologic content, and the laboratory in question soon telegraphed to defer the operation, as the bacilli had been found to be smegma. At a later admission Dr. Kelly operated because of the symptoms and blood in the urine and found an oval stone about 2 cm. in length in the pelvis of the kidney.

Pyelitis, Pyelonephritis, Pyonephrosis—It may be impossible, except at operation, to diagnose any one of

* Read at the eighteenth annual meeting of the Southern Surgical and Gynecological Association at Louisville, Ky.

these conditions from an infected nephrolithiasis. Indeed, the presence of a stone may cause any of these conditions and again a stone may develop because of the infective process. If the history shows the trouble to have begun during or soon after one of the acute infectious diseases or during pregnancy, or after the development of a pelvic tumor, the condition is more likely to be one of infected kidney. But we can not exclude the presence of a stone in view of such a history, for it is often under the conditions named that an aseptic stone kidney becomes infected and first begins to cause symptoms. The infected stone kidney is not infrequently the seat of such a connective tissue hypertrophy that the x-ray picture is simply a large shadow in which no stone can be outlined. This tissue hypertrophy may extend to the ureter and so close its lumen as to prevent the passage of a wax-tipped bougie into the pelvis as happened in one of my cases.

Tumor—It is by no means easy to differentiate between stone in the kidney and a tumor. Here, again, our chief dependence is in the examination of the urine. The occurrence of a profuse hemorrhage which begins and ceases suddenly favors the diagnosis of tumor. The presence of a persistent large tumor mass in the kidney region and the absence of pus in the urine is a combination of circumstances suggestive of tumor. It must not be forgotten that a comparatively small stone blocking the ureter may cause a marked swelling of the kidney and be associated with blood and an absence of pus in the urine.

CASE 2—In the case of Mrs. T., June 27, 1904, I found a large tender left kidney and the urine showed considerable blood, many large epithelial cells, some unusually large, and in absence of pus. I made a probable diagnosis of tumor, but the patient refused further examination and in a few weeks passed a stone.

CASE 3—The largest swelling of the kidney that I have ever seen was caused by the presence of an enormous stone, accompanied by fibrous hypertrophy and pyonephrosis. In examination of the urine on five consecutive days I had failed to find tubercle bacilli in the urine and considered the case one of infected tumor or nephrolithiasis. The wax-tipped bougie was negative, due, as I found after removal of the kidney with a portion of the ureter, to sclerotic thickening of the isthmus, which so narrowed the lumen that the catheter could not pass.

Microscopic examination of the kidney cortex demonstrated the presence of tuberculous disease.¹

Intermittent Hydronephrosis—A movable kidney, in which the conditions favor the sudden kinking of the ureter, may give rise to attacks which very closely simulate renal colic due to stone. In either case there may be more or less constant discomfort in the back, with the occasional attacks of severe pain, followed by blood in the urine. If the patient is carefully watched, however, the diagnosis of Dietl's crisis is favored by finding the kidney misplaced and enlarged during the attack, and its return to normal size and position is accompanied by relief of pain and increase in the amount of urine.

Before finishing the discussion of the more common kidney diseases which may be mistaken for stone I must mention two other conditions of which I have seen a few examples. Under the designation of idiopathic hematuria or of renal epistaxis are classed those cases of renal hemorrhage for which we can find no cause even at operation. I have seen one patient who had become profoundly anemic from the loss of blood. Splitting of

the kidney in her case resulted in at least a temporary cure, although no cause could be found for the bleeding. I believe there is a tendency to-day to classify many of these cases of so-called renal epistaxis with the chronic interstitial form of Bright's disease. Acute monolateral nephritis may be even more misleading than the above condition, because, in addition to the suggestive urinary findings, we have the acute onset of renal colic.

DISEASES OF NEIGHBORING ORGANS

Gallstones—Because of the proximity of the gall bladder to the right kidney, we are not infrequently called on to differentiate diseases of these two organs. The urine shows blood if we are dealing with stone in the kidney and bile if there happens to be obstruction in the common duct. The pain is more likely to radiate down the ureter in the one case and to the epigastrium and up under the shoulder blade in the other. If the gall bladder is enlarged it is more superficial and has more of a pendulum movement than the kidney. Pressure over a normal liver border may be transmitted to a very tender right kidney and the symptoms be misinterpreted. Except under conditions of special technic, the x-ray does not register a shadow for gallstone.

One of the best means for differential diagnosis is that devised by Dr. Kelly of catheterizing the right kidney and forcibly injecting a bland sterile solution into its pelvis. The patient can generally tell very accurately whether the pain thus produced is similar in character and location to the pain previously suffered. If the pain caused by the injection corresponds to the patient's previous symptoms, we have simply found the location and can not say definitely that we are dealing with nephrolithiasis. An unusual amount of blood after injection is suggestive of a pelvis already injured by stone. If the wax tip returns with scratch marks, we are certain of stone in the kidney or ureter. If the pelvis holds an unusual amount (the normal pelvis takes in woman 126 mm., 75 c.c., or 2 drams, before the patient complains of a fullness or discomfort), there is a dilatation which we have found due to various conditions, viz., stone in the kidney or ureter, movable kidney, stricture of the ureter, and tumors of the pelvic organs pressing on the ureter.

The following case, after the kidney investigation, was considered to be one of probable gallstone irritation.

CASE 4—Mrs. A., aged 63, the mother of several children, was operated on at the Johns Hopkins Hospital in 1897 for acute appendicitis with abscess formation. The drainage wound became the site of a hernia, for which she was operated on in 1900. I saw the patient with Dr. Finney in July, 1904, at the Union Protestant Infirmary. She had been complaining for about six weeks with an indefinite nagging pain in the upper abdomen, more on the right side. She had had no stomach or bowel trouble, no fever or jaundice. There had been some soreness at times over the right hypochondrium. On examination there was general tenderness over the upper right quadrant of the abdomen. We thought of gallstones and of an omentum adherent to the laparotomy wound in the lower part of the abdomen, and causing the symptoms by tugging on the mesentery of the hepatic flexure of the transverse colon.² A specimen of urine catheterized from the bladder contained a few pus and epithelial cells. No red corpuscles were noticed. On cystoscopy I found the bladder reddened in areas, and considered these changes sufficient to account for the few pus and epithelial cells found in the urine. Wishing to exclude stone in the right kidney, however, I catheterized this organ with a wax-tipped bougie with negative results. The urine

¹ "The significance of the Urinary Examination in Women," Southern Surg. and Gyn. Transactions, 1904, Case 2, p. 489, also Amer. Med., 1905, vol. ix, p. 559.

² Hunner, "An Interesting Complication in the Diagnosis of Gallstone," Am. Med., 1903, vol. v, p. 698.

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from this kidney contained no pus and the slight amount of blood present was attributed to the trauma of catheterization. About three weeks after this catheterization the patient had her first severe attack of renal colic, passed small stone by the urethra, and has since enjoyed good health.

Appendicitis—It would seem to the casual observer that disease of the appendix could not be easily mistaken for renal calculus. But we must remember that many appendix attacks are accompanied by little or no elevation of temperature and that the pain may be located in the kidney region. If we include in this discussion stone in the ureter, we can readily understand that the diagnosis may become more complicated. The ureteral stone may be lodged on the brim of the pelvis and give local pain and tenderness almost exactly under McBurney's point. On the other hand, an inflamed appendix may reach over into the pelvis and cause bladder and rectal symptoms, and, on palpation through the vagina or rectum, the peri-appendicular tenderness and thickening may be mistaken for signs of stone in the ureter. The urine is our safest guide in such cases, but I have recently had a most remarkable case in which I was completely misled because of the urine examinations.

CASE 5—Miss R., a trained nurse, aged 26

History—For ten years she had complained of attacks of pain in the right side, with a more or less constant pain in the region of the right kidney. I saw the patient in consultation with Dr. Julius Friedenwald in December, 1904. She had had two severe attacks within four weeks, requiring hypodermics of morphia for each attack. The attacks, which usually lasted several hours, began with throbbing in the rectum. This increased to a severe pain in the pelvic region and was followed by pain in the region of the right kidney. With some attacks there had been pain in the bladder. At times there had been vomiting. She had never been jaundiced. She stated that the pain never began in the kidney region, radiating downward. There was no very marked soreness anywhere after the attack was over. A number of the attacks had been followed by the passage in the urine of large amounts of pus and blood. After one of these attacks the urine was catheterized from the bladder and sent to one of the most careful microscopists in Baltimore. He found both pus and blood.

Examination—At my first examination the urine catheterized from the bladder was absolutely normal. A wax-tipped bougie passed to the right kidney returned negative, and the x-ray picture was negative. The patient was very stout and I felt that the x-ray might easily fail to cast a shadow, particularly if the stone were small and of porous formation. While the symptoms pointed to a pelvic location of the primary trouble, I felt that the negative wax tip was almost positive evidence that the ureter contained no stone, and yet the urine findings after the attacks had been so positive that I considered the case one of urinary tract disease.

Operation—I began the operation by exposing the kidney and splitting it from end to end. The kidney was large, and indentations on the surface appeared like scars. No stone being found in the pelvis of the kidney, nor palpated in its substance, I closed this organ with mattress sutures of catgut and explored the ureter as far as the pelvic brim. The lumbar wound was then closed, except for slight drainage to the kidney cortex, and turning the patient to the dorsal position, I made an extraperitoneal inguinal incision and explored the ureter from the pelvic brim to the bladder, with negative results. I then opened the peritoneum and found an hypertrophied inflamed appendix, which, reaching over the pelvic brim, was densely adherent over the ureter. The right ovary was so firmly attached to the peritoneum over the pelvic ureter that I was obliged to free it by scissors dissection. I can explain her attacks of renal pain and hemorrhage only on the supposition that the appendicular inflammation was communicated to the ureter causing a temporary stenosis of this organ, with acute hydronephrosis and evidence of kidney inflammation. A section of the kidney cortex taken from one of the scarred looking

areas showed a mild grade of interstitial infiltration with areas of glomerulo-nephritis. The patient, whose attacks had been increasing in frequency, has been perfectly well since the operation.

Intestinal Obstruction—Occasionally an attack of renal or ureteral stone colic causes a reflex paralysis of the bowel, with its attendant meteorism and obstipation. If the attack is accompanied by rectal tenesmus, nausea and vomiting, the picture is still more confusing.

CASE 6—Mrs. K., aged 61, seen with Dr. Eldred at Sparrows' Point. The patient was taken five days ago with sudden pain in the left flank region. She has had several attacks each day, the attacks being more marked between midnight and 6 o'clock in the morning. Dr. Eldred at first considered the attacks due to stone in the kidney or ureter, but as he was unable to get the bowels moved, and as the intestinal distention and distress grew more marked, he began to fear intestinal obstruction. A catheterized specimen of urine was very dark colored. Unfortunately, I did not have a good microscope at hand and did not determine whether there was blood in the urine. The bowels were moved on the day of my visit, and about one week later the patient passed a cylindrical stone about 1 cm. long.

Pancreas Stone Colic—Recent work by Opie and others has demonstrated conclusively the intimate relationship between gallstones and pancreatic disease. One would scarcely mistake the typical case of acute hemorrhagic pancreatitis, with its sudden onset of acute colicky pains in the epigastrium, nausea and vomiting, subnormal temperature, or chills and fever, and especially when accompanied by the early onset of severe collapse symptoms, for a case of renal calculus. But the mistake might easily be made in the more chronic cases of pancreatitis. The history of former attacks of indigestion or typical gallstone colic, the location of the pains, the presence of a pancreatic tumor, are all helpful differential points. In the future many cases will be differentiated by the examination of the urine, the kidney-stone cases showing blood, while sugar will be found in the pancreatic cases.

Henoch's Purpura and Angioneurotic Edema—Both of these conditions are often marked by attacks of gastrointestinal crises and renal hematuria, a combination of symptoms that might easily lead to a diagnosis of renal colic caused by stone.

CASE 7—L. F. Jewess, aged 20, married. I saw this patient immediately after her admission to the Hebrew Hospital on March 19, 1905. She was flexed almost double by epigastric pain, which two quarter-grain hypodermics of morphia had failed to relieve. The husband said that she had such attacks about once a month. I suspected gallstone colic, and on examination found that another surgeon had anticipated my diagnosis. The husband explained that the linear scar in the right hypochondrium had been made at the City Hospital one year before and that gallstones were not found.

I then instructed the resident physician to examine carefully a catheterized specimen of urine, as he would almost surely find blood as an evidence of stone in the kidney. As I turned to leave, the wife found her Yiddish tongue and the husband said, "Oh, yes, doctor, please look at the lump on her leg." Situated over the upper end of the left tibia was an oblong elevation of the tissues, measuring about 4x6 cm., purple in color, the color disappearing from local areas on pressure and slowly returning. Knowing Dr. Osler to take a special interest in visceral crises in purpuric conditions, I asked the resident physician to notify him of the case. "Yes, yes," said the husband, "she has been in the Hopkins Hospital several times." By referring to the hospital records I found that she had been admitted repeatedly because of attacks similar to the present one. With some attacks she had nausea and vomiting and epistaxis. "Black and blue" spots had been mentioned by the family, but subcutaneous bleeding had not been seen at the hospital, and the diagnosis had always been entered as "re-

curring attacks of abdominal pain" The urine during and immediately after these attacks showed a trace of albumin and hyaline and granular casts, but no blood

In this cursory and superficial view of the subject I have hoped to throw out enough suggestions to convince you that the diagnosis of stone in the kidney is often a very difficult problem, to be solved generally by a process of exclusion. In closing I recall a sentence from Israel's introduction to his chapter on the diagnosis of kidney-stone colic. He says, in effect, that if one would place himself in a position to diagnose other cases than those with the typical symptom-complex he must, first of all, divest himself of the schematic picture so often presented in the text-books

A CASE OF TRAUMATIC ENDOCARDITIS

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Our knowledge of traumatic endocarditis is still very imperfect, though many valuable contributions have been added to our literature since George Fischer¹ published his excellent monograph on this topic.

The following case recently came under my observation, and as I had the opportunity of observing it from its very beginning until its end, a period of nearly two years, I consider it of sufficient interest to publish it.

History—Albert S., aged 9, always enjoyed fair health. There was no syphilitic, tubercular or rheumatic history in the family. At the age of two the patient had measles and subsequently several attacks of acute bronchitis. No tubercular element in these attacks was noticed.

During the winter of 1902 the patient contracted a light attack of pneumonia, which lasted about one week and left him rather weak. Mucous râles could be heard over both lungs for several weeks after the attack. During his entire illness pulse had always been normal and of good quality. The heart sounds and area of heart dullness were normal. Examinations of urine showed a specific gravity of 1012 and no pathologic constituents.

Examination—On June 8, 1903, while running, the patient fell violently on his chest. He immediately became unconscious, and two hours after the accident I found him still suffering from profound shock. His face and extremities were cyanotic and covered with a cold perspiration. Respiration was superficial and rapid, temperature subnormal. Pulse small and fast, 170 to 180, of very low tension.

On inspection the whole left side of the thorax appeared to be pulsating, the heart action was so rapid and tumultuous that it was impossible on auscultation to differentiate between systole and diastole. A loud murmur could be heard over all the valves, but its time relation to the heart cycle could not be clearly made out. It seemed to be a continuous murmur. The region of the chest, bounded by the right border of the sternum, the middle axillary line, the third rib below and the epigastrium below, was pulsating so violently that the heart action was plainly visible at a distance. The heart dullness corresponded with this area of visible pulsations. The apex beat appeared to be between the anterior and middle axillary lines in the seventh intercostal space. On the next day, when I saw the patient in consultation with Dr. I. Adler, his general condition and heart action had not changed. No fluid was found in the pericardium. Patient had partially regained his consciousness, but was still very apathetic and listless.

Treatment—The treatment consisted in the application of the ice bag over the heart and internally five drops of tincture of opium every two to three hours. On the third day one drop of the fluid extract of digitalis every two to three hours was added. As the patient could not stand the pressure of the ice bag we resorted to icy cold water applications. Under this treatment the acute symptoms subsided and the fourth

day after the injury the heart action became more regular, the pulse now was 110, small and easily compressible. A loud blowing systolic murmur could be easily heard over the region of the apex beat, which was transmitted to the left and behind. The heart sounds over the aortic, pulmonary and tricuspid valves were not quite clear, but no murmur could be heard. The digitalis treatment was continued, but the dose was reduced to one drop three times a day.

Further Examinations—On June 28 the boy was allowed to sit up in bed. A careful examination of the heart on that day still revealed the same loud systolic murmur over the mitral valve. The sounds over the other valves were perfectly clear and normal. The digitalis treatment was continued one to two drops a day and when, after an extended absence from the city, I saw the patient again on Oct. 25, 1903, I found his general condition much improved, pulse 120 and his heart smaller. In addition I could now hear a loud diastolic and faint systolic murmur over the aortic valve which were not present at the time when I left the patient in June. I did not see much of the patient during 1904, as he had been taken to the country apparently improved. I saw him again on Jan. 4, 1905, when he showed the signs and symptoms of an influenza. During the attack the heart again became insufficient, and fluid extract of digitalis was again given. The most prominent symptoms during this influenza attack was the very marked dyspnea. Patient improved again and on Feb. 27, 1905, I showed him at a meeting of the Society of German Physicians of New York. At that time he was pale, anemic and poorly nourished. He was restless, easily excited and for a few weeks had showed distinct choreic movements. Nothing abnormal could be discovered in the lungs, but on deep respiration the lower intercostal spaces were drawn in. The heart impulse was easily visible, its pulsation can be seen extending from the right border of the sternum to the anterior axillary line. The apex beat was most distinct in the sixth intercostal space between anterior and middle axillary line. There was a distinct pulsation in the epigastric region. The heart dullness extended from the third rib above to the apex beat below and from the anterior axillary line to the right border of the sternum. Over the apex a loud blowing systolic murmur could be heard, which was transmitted to the left. Over the aorta a loud systolic and diastolic murmur could be made out. A systolic murmur was also heard in the carotid, subclavian, axillary, brachial and femoral arteries and a distinct murmur on either side of the vertebral column extending from the lower end of the scapula to the first lumbar vertebra. The carotids pulsed visibly. The pulsation of the capillaries could be seen under the finger nails (Quincke's capillary pulse). The second pulmonary sound was accentuated. Nothing abnormal was found over the tricuspid valve. There was no venous pulse. A systolic thrill could be felt over the entire heart area, particularly over the left ventricle. Pulse was 120 and of a low tension. The blood pressure, according to tonometer of Gaertner, was 70/80 mm. The liver was distinctly palpable about two fingers' breadth below the free border of the ribs. The spleen could also be palpated under the free costal margin. The urine of a specific gravity of 1018 showed a slight trace of albumin, but no casts. No edema or ascites was noticed. Eye sight was apparently normal. Patient complained of frequent attacks of dyspnea, palpitation of the heart and extreme weakness.

Further Treatment—On April 20, 1905, I was called to see the patient. His heart's action was identical with that observed right after the original injury. A very severe dyspnea was present, pulse 160 to 170, heart's action very rapid and tumultuous. He told me that another boy hit him and he had to run away from him. I again ordered the cold applications to heart and gave him internally two to three drops pure tincture of opium every two to three hours. The cardiac insufficiency was very marked and the whole left side of the thorax seemed to pulsate. The insufficiency of the heart became more apparent from day to day. Face and extremities were cold and cyanotic. Digitalis and hypodermic injections of strychnin finally had no more influence on the heart's action and on May 2 patient died. On account of religious scruples the autopsy was not permitted.

¹ Geo. Fischer "Die Wunden des Herzens und des Herzbeutels," Archiv f. klin. Chir., vol. ix, 1868

LITERATURE AND DISCUSSION

This interesting case induced me to look up the literature of similar cases in order to compare them with mine and to study their mechanism and the changes produced in the anatomy of the heart.

How a traumatism in the shape of a fall or any other violent contusion inflicted on the thorax affects the heart muscle has been for years a matter of serious consideration and research and the opinions of the different authors vary greatly.

Mauclaire² claims that all such injuries to the heart are due to hydraulic pressure and that the resultant injury will vary according to whether the heart at the time of the trauma was in systole or diastole. He claims that these severe contusions always cause "*une véritable aneurysme cardiaque*".

Schmidt³ explains the injury to the heart caused by blunt violence, by the mechanical pressure of the blood column itself in the aorta. The blood pressure being suddenly increased by the injury may be sufficient to tear the valves, when immediately after the diastole the artery is filled to its maximum and the valves are closed. Under such favorable conditions, he claims that even a mild concussion may cause serious injury.

Ebbinghaus⁴ does not share this theory, and he thinks that the elastic fibers in the wall of the artery will sufficiently compensate for the shock.

Barié⁵ claims that the severe compression of the thorax at the time of the injury caused in turn a sudden backward pressure of the blood against the valves and may burst these. All authors agree that any violence which causes a compression of the thorax also increases seriously the blood pressure in its interior, particularly in the arteries.

After these general remarks let us analyze my case. At the time of the injury the boy was rather weak, having gone through a number of attacks of acute bronchitis and a light attack of pneumonia, but his heart, muscle as well as valves, had always been in normal condition. The pulse and urine were normal. I do not think that the repeated attacks of bronchitis and above mentioned pneumonia had a serious influence on his myocardium, as he never showed any signs of a disturbance in the circulation. He had no temperature at the time of the injury—this will exclude any acute ailment, nor did he have any increase of temperature after the injury. The injury to the heart and the endocarditis following it could not have been caused by anything else but the trauma, because immediately afterward the previously apparently healthy heart showed the severe clinical affection described above. As the trauma did not cause the least injury to the wall of the thorax itself nor any visible injury of any kind, we must assume that we had to deal with a so-called *contrecoup* injury to the heart. One of the most striking features of my case was the enormous dilatation of the heart, but there was no tear in the heart muscle itself, no fluid could be detected in the pericardium by either Dr. Adler nor myself. The extent of the dilatation did not change very much during the entire two years, and the compensation of the heart muscle itself was never well established.

Ebbinghaus⁴ claims that the acute dilatation of the heart muscle itself may cause a tear in the endocardium,

even when there is absolutely no injury to the bony framework of the thorax, which, being elastic, yields, but the heart muscle not yielding, causes a *contrecoup* tear in the endocardium. In all cases where the heart muscle has been injured by blunt violence the valves are most frequently affected, and even a perfectly sound valve may be seriously injured or ruptured, as demonstrated by Barié⁵ in experiments on the cadaver and by cases published by Foster⁶ and Schmidt³.

The left ventricle, valves and muscle are much more liable to injury than the right, but the rupture of the muscle seems to be more frequently met with on the right side. Barié's⁵ statistics of thirty-eight cases show injury to the aortic valve nineteen, mitral valve sixteen, and tricuspid valve three. Of all the valves the aortic is most frequently injured. The injuries to the mitral valve consist mostly in the tearing of the chordae tendineae or of the papillary muscles. The valve itself is rarely implicated. In Barié's sixteen cases of mitral injury mentioned above an autopsy was made in fifteen cases and nine showed the tearing of the chordae tendineae, five the tearing of the papillary muscles, in one case both lesions were present, none, however, showed a tear in the valve itself. These injuries always cause an insufficiency of the valve. In my own case the mitral and not the aortic valve received the full force of the violence at the time of the accident, as the murmur, which could be heard soon after the injury, was a loud systolic one, heard most distinctly over the apex and transmitted to the left. Nothing could be heard over the aorta after the *delirium cordis* had somewhat subsided on the third day. Similar cases have been reported by Stokes and Townsend⁷. In these cases the autopsy revealed a tearing of the chordae tendineae of the mitral valve.

The injuries of the endocardium are usually followed by endocarditis, which develops in consequence of the injury to the valves or any other part of the endocardium (Rosenbach⁸). Many authors think that the so-called traumatic endocarditis most frequently causes stenosis of the valves, but a careful study of the literature leads me to believe that we meet just as many insufficiencies.

In my own case the traumatic endocarditis caused primarily an insufficiency of the aortic valve and the stenosis followed the insufficiency. In October, 1903, four months after the accident, I detected, for the first time, a loud diastolic murmur of the aortic valve. The systolic sound was muffled, but a distinct murmur could not be heard. The systolic murmur developed gradually, and at the time of the demonstration of the patient in February, 1905, the two aortic murmurs were of the same intensity. The primarily developed insufficiency soon caused stenosis by verrucous granulations forming on the diseased valve and narrowing the lumen of the ostium. This pathologic process has been described by C. Gerhardt⁹.

The origin of traumatic endocarditis has been also a subject of great dispute. Litten¹⁰ and many others claim that the injury to the endocardium provides a convenient nidus for micro-organisms, which in turn cause the above mentioned verrucous granulations on the valve and stenosis.

2. Mauclaire. Les plaies du cœur et du péricarde. Indépend. Méd., Paris, 1901 vol. vii, p. 9. "Des contusions du cœur et du péricarde." Ibid.

3. Schmidt. "Ueber traumatische Herzklappen und Aortenzerreissung." Münch. Med. Wochsft., 1902 p. 1035.

4. Ebbinghaus. "Ein Beitrag zur Lehre der traumatischen Erkrankungen des Herzens." Deutsche Zitt. f. Chir., 1902, vol. lxxi, p. 175.

5. Barié. Revue de Méd., 1881 pp. 153, 309, 482.

6. Foster. Medical Times and Gazette, 1873 vol. ii p. 657.
7. Townsend. Cyclopaedia of Practical Medicine, 1839. Supplement 4-p. p. 634.

8. O. Rosenbach. Ueber arterielle Herzklappenfehler. Archiv f. exper. path. u. Pharm. 1878 vol. ix, p. 1.

9. Gerhardt. Zur Kenntniss der Aorteninsuffizienz, Charité Annalen, 1878 vol. xii.

10. M. Litten. Ueber traumatische Endocarditis, Aerztliche Sachverständig., 1900 No. 24 p. 493.

Randall's Island Hospital Three days later, beginning facial palsy appeared and rapidly progressed to complete paralysis. Three and one half months later complete R D was found on electrical examination.

Operation—On October 24, 1903, under chloroform anesthesia, operation disclosed the facial nerve soft, friable and gray in appearance, slight traction on it with the thumb forceps drew it out of the stylo mastoid foramen without the necessity of dividing the nerve. (This fact was not stated in the previous report, but is recorded in the original notes on the case.) Two lateral sutures were inserted to implant its end in the slit in the hypoglossal. One of these pulled out through the substance of the facial nerve after both sutures had been tied, and not enough nerve was left to attempt to insert another

four months the face was symmetrical during quiescence (Fig 3). The muscles still showed R D.

From this time there has been steady but slow improvement. Very slight voluntary movement appeared first at the corner of the mouth eight months after operation (Fig 4). One year after operation the motion in these muscles was very distinct and much increased (Fig 5). The tongue still protruded to the right side (Fig 6), but less than immediately after operation (Fig 2), and it could be voluntarily moved in all directions. The right side was distinctly smaller than the left. The patient was not conscious of any discomfort. Thirteen months after operation the eye could be almost completely closed and the corner of the mouth drawn well out toward the right ear (Fig 7). These motions could also be done sepa-



Fig. 1—Case 1 Before operation. Complete paralysis of right side of face.



Fig. 2—Case 1 After operation one week, showing deviation of tongue to right side.



Fig. 3—Case 1 Four months after operation, showing symmetry of face during quiescence.



Fig. 4—Case 1 Eight months after operation, showing beginning of voluntary movement at right angle of mouth and return of naso labial fold.

As there was considerable tension on the remaining suture, a catgut suture was passed through the sheath of the hypoglossal nerve below the anastomosis, and then through fascia, so that when it was tied the hypoglossal was pulled up and outward, thus relieving tension at the anastomosis, which was still, of course, very unsatisfactory. Cargile membrane was wrapped about the junction and the wound closed. Primary union resulted.

Subsequent History—There was almost complete palsy of

the right side. There was voluntary motion in the corrugator supercilii. The patient could smile and show all the upper incisor teeth (Fig 8). Thirteen months and three weeks after operation these motions were more pronounced (Figs 9 and 10). Eighteen months after operation improvement was still continuing, most marked in the orbital and supraorbital regions. The eyelids work automatically in a nearly normal manner.



Fig. 5—Case 1 One year after operation. Increased range of motion at angle of mouth and dimpling of chin.



Fig. 6—Case 1 One year after operation. Tongue still deviates to right but can be voluntarily moved in all directions.



Fig. 7—Case 1 Thirteen months after operation. Closure of right eye (compare Fig 1). Good contraction of face muscles. Each of these motions can be done separately and alone.



Fig. 8—Case 1 Thirteen months after operation. Almost symmetrical smile. Emotional on left (normal) side. Volitional on right (paralyzed) side.

the muscles supplied by the hypoglossal immediately after operation (Fig 2). The resulting interference with phonation, deglutition and mastication lasted for many weeks, although after ten weeks it had ceased to be annoying. The right side of the tongue, while it has regained its full range of motion, has always remained somewhat smaller than the left side (Figs 6 and 10). Because of the unsatisfactory anastomosis the prognosis as to return of power in the facial field was distinctly unfavorable. However, systematic after treatment was carried out with the following results. At the end of ten weeks there was distinctly less asymmetry of the face and at

At twenty five months, improvement is still continuing. The laugh is more nearly symmetrical (Fig 11). Power to elevate the upper lip is greater (Compare Figs 11, 12, 13, 15 with 2, 8 and 9). Power to elevate the lower lip has appeared (Fig 13). The frontalis is beginning to act slightly (Fig 15). The corrugator supercilii is stronger (Fig 16).

CASE 2—History—B G, aged 45, in August, 1903, had severe pain in the right ear for two days, followed by complete paralysis of the right side of the face. Electricity, massage and

baths systematically used for three months elicited no evidence that power would return spontaneously. R D persisted in the muscles from the beginning.

Operation—On Nov. 29, 1903, under ether anesthesia, anastomosis was made without any tension on the sutures. Primary union resulted.

Subsequent History—Following operation, there was paralysis of the muscle field of the right hypoglossal nerve (Fig 17). The tongue protruded to the right side and there were difficulties of speech, mastication and deglutition as in the preceding case. After six weeks these difficulties had disappeared, although the tongue remained smaller on the right side (Fig 18). For nearly two months this patient complained of moderate intermittent pains in the shoulder neck and external ear of the right side. These were probably due to injury to the auricular branches of the cervical plexus during the operation, the pain being referred also to other branches than the ones injured.² Six weeks after operation, although R D still persisted, there was a distinct diminution in the amount of constant current which it was necessary to pass through the anastomosis to cause contraction in the facial field. Two weeks after operation the tongue deviated markedly to the right side, could not be voluntarily moved to the left, and the right side was noticeably smaller and more wrinkled. The paralysis of the face is evident from the staring eye, the absence of wrinkles on the right side as compared to the left, and the absence of the nasolabial fold on the right side (Figs 17 and 18). Four months after operation (Fig 18) the tongue protruded almost straight and had regained nearly normal range of motion. The face at rest had largely regained its symmetry and the nasolabial fold had reappeared. The opening of the mouth and protruding tongue prevent it from showing in the photograph.

Six months after operation (Fig 20) a considerable amount of voluntary motion had returned at the angle of the mouth and somewhat less in the right palpebral region. This side could be worked independently of the other. Note the diminished palpebral fissure. When an attempt was made to use both sides of the face at once, to show the teeth (Fig 19), the left side was so much stronger as to pull the right side over and reproduce an appearance of paralysis.

After six months the patient disappeared and has been lost to observation in spite of repeated efforts to trace her. From the progress made in six months it is probable that her present showing would be very satisfactory, especially since the major part of her improvement occurred between the fourth and six months of the time that she was observed.

CASE 3—L. M., aged 26, had complete right facial palsy following a mastoid operation done eighteen months previously. There had been no spontaneous improvement.

Operation—On Dec. 22, 1903, Dr. Weir, assisted by Dr. Taylor, performed the operation, using ether anesthesia. The operation went smoothly and was followed by primary union. Paralysis of the hypoglossal muscle field and the pains complained of by B. G. (case 2) followed operation in this case, but disappeared after a number of weeks.

Further Remarks—This patient came very irregularly for after treatment, and about three months after operation moved out of the city. In January, 1905 (thirteen months after operation), she reappeared for inspection. Although she had entirely neglected the instructions as to after treatment, the result was still pretty satisfactory, as indicated in the photographs (Figs 21 and 26).

In this case swallowing was accompanied by a slight grimace of the right side of the face, correlated motions analogous to those of the face and shoulder in faciospinal accessory anastomosis.

Figure 21 shows the face in natural pose before operation, Figure 22, the degree of closure of the eye, Figure 24, taken thirteen months after operation, shows the return of symmetry during repose, with normal nasolabial fold and frontal wrinkles (compare Fig 21), Figure 25 shows

the power to close completely the eye and retract the right side of the mouth (compare Fig 22), Figure 26 shows separate control of the right side of the mouth and face, Figure 23 shows recovery of the tongue from its paralysis and the power to protrude it well over to the left side.

In all three cases paralysis of the hypoglossal muscle-field was an immediate sequel to the operation and persisted for a number of weeks. This was undoubtedly due to traumatism inflicted on the hypoglossal at the time of operation. To minimize this injury a set of special instruments was designed³ and used in the later cases with very satisfactory results.

CASE 4—*History*—Mrs. M. J. had had complete facial paralysis (Bell's palsy) of the left side of the face for twelve years, with the deformity shown in Figures 27 and 28. There was marked atrophy of the muscles. There was some reaction to the galvanic current at the left corner of the mouth (Complete R D). The left eye was painful on continued use, and there was increased lacrimation with an annoying overflow on to the cheek.

Operation—On Jan. 7, 1905, under ether, the usual operation was done and the nerves were approximated without tension. Although the palsy had existed twelve years, the trunk of the facial nerve appeared normal in size, color and consistency. A small segment was taken for microscopic examination. This was the first case in which the special instruments were employed, and after operation the patient had none of the hypoglossal palsy which was so annoying in the preceding cases. There was numbness of the left ear, and some of the pains noted in the preceding cases were experienced. The wound healed by primary union.

Subsequent History—Seven weeks after operation the face felt different and more comfortable than it did before operation. Lacrimation was distinctly less annoying and the eye was less troublesome. The patient and her friends thought that the face was becoming more symmetrical and that the eye could be more completely closed, but a careful inspection failed to verify that fact.

Fifteen weeks after operation the asymmetry was slightly lessened and the patient felt that the face was stronger. During the last few weeks of that period there has developed a slight but distinct atrophy of the left side of the tongue, so that it protrudes somewhat to the left involuntarily. Nevertheless the patient can move it in any direction at will. Five months after operation slight dimples could be formed in the chin voluntarily, but a successful photograph was not gotten till eleven months had passed. By this time the lower lip could also be slightly elevated (Fig 31).

After a palsy lasting twelve years, so early a return of power, though only slight, promises much for the final result.

CASE 5 (referred by Dr. W. C. Phillips)—Miss I. C., aged 26, strictly speaking, can not be classed as an illustration of a case of faciohypoglossal nerve anastomosis, but the attempt to do the operation developed certain facts that make it worth reporting in connection with the other cases.

History—For twelve years this young woman had suffered from mastoid disease and had had some five operations. After one of the operations for an acute exacerbation eight years ago there appeared a complete facial palsy of the right side which has persisted. Also during one of the exacerbations several years ago there had developed a diffuse cellulitis of the upper part of the neck, which left a cicatrix covering the upper third of the right side of the neck. There was a small sinus back of the auricle leading into necrosed bone.

Operation—The attending otologist requested that the nerve anastomosis should be done immediately after he had removed the diseased bone, in order that one anesthesia should answer for both purposes. After a careful cleansing of the field the usual operation for the anastomosis was started. After a painstaking dissection, which lasted an hour, involving exposure of the stylomastoid foramen, it became evident that the trunk of the facial nerve was not present. Moreover, the upper

² In Case 6, where this nerve was retracted instead of divided, these pains did not appear.

³ Med. Record, March 4, 1905.

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third of the sternomastoid muscle was lacking. It, therefore, seemed probable that the diffuse cellulitis above referred to had caused the destruction of the nerve and muscle. The operation was abandoned.

Inasmuch as the patient had been under the anesthetic for two hours, it did not seem wise to attempt any modification of the operation, but in a similar case under favorable circumstances it would seem reasonable to attempt to expose the facial branches in the posterior part of the parotid (assisted by a needle electrode), and, if they were found, to reflect a portion or the whole of the hypoglossal or spinal accessory nerve and do an end to end suture.

CASE 6 (case referred by Dr. L. L. Mill) —John L. E., aged 19, had a complete left facial palsy after a mastoid operation which was done five and one-half months previously. The palsy was first noted twenty-four hours after operation and became complete forty-eight hours later. After the third month there seemed to be some slight improvement about the eye, but it was of short duration, and for six weeks before operation there was absolutely no progress, there was complete R. D., and the consulting neurologist gave an absolutely bad prognosis.

Operation—On Feb. 14, 1905, operation was performed under ether anesthesia. The transverse process of the atlas was more than twice as large as usual and caused a distinct rounded prominence of the soft parts behind the angle of the jaw. This anomaly (which was bilateral) rendered the later steps of the operation exceedingly difficult. The great auricular nerve was identified and retracted instead of being divided as in the preceding cases. The facial nerve was readily identified. Around it and compressing it for a distance of a centimeter from the stylomastoid foramen was dense cicatricial tissue from which it was dissected with some difficulty and then it was divided at the stylomastoid foramen. This cicatricial compression would have caused a persistent palsy. The hypoglossal was exposed as usual, but because of the anomaly above mentioned it lay at the bottom of an unusually deep and narrow hole. The anastomosis was finally completed after much difficulty and considerable traumatism to the hypoglossal. The operation lasted two hours.

Subsequent History—The patient reacted well and primary union resulted. From the considerable operative traumatism to the hypoglossal it was expected that a well marked paralysis of its muscle-field would result, but happily this did not occur. There was a very slight degree of deviation of the tongue to the left, but it could be moved in all directions voluntarily. There was but slight disturbance of phonation and deglutition. There was loss of sensation in the upper part of the auricle. He returned home on the fifth day. Ten months have elapsed and there is no evidence of returning power.

CASE 7 (case referred by Drs. Ducl and Ledermann) —Albert L., aged 28, had a complete left facial palsy following a mastoid operation in January, 1905. After eight and one-half months there was no evidence of returning power, and, as the probability was that the nerve had been divided at the mastoidectomy, nerve anastomosis was decided on.

Operation—On Oct. 14, 1905, under ether anesthesia, part of the lower facial canal was removed and the nerve divided. Even so it was somewhat shorter than was desirable. The anastomosis was carried out in the usual manner, except that no Cargile membrane could be wrapped about the junction. The operative result could be classed only as fairly satisfactory.

Postoperative History—The recovery was good and primary union resulted. The day after operation the tongue deviated slightly to the left and there was slight interference with swallowing. A week after operation the tongue could be voluntarily moved in all directions although its left side looked somewhat smaller than the right. One month after operation the excessive lacrimation of the left eye, which had been present before operation, ceased and the left side of the face "felt different and stronger." Ten weeks after operation

the face looked very slightly less asymmetrical. The tongue, while smaller on the left side, is freely movable in all directions. The diminished lacrimation and improved facial symmetry indicate a probably favorable result.

In the third, fifth and sixth cases there was considerable cicatricial tissue below the mastoid tip surrounding the facial trunk after its exit from the stylomastoid foramen. To identify and free the facial nerve under these conditions is a delicate and tedious task. In future similar cases it would seem a more certain and rapid procedure to expose the facial nerve in the lower part of its canal by removing some of the mastoid bone and then to follow the identified nerve through the cicatricial tissue to the parotid gland.

In other cases where the facial trunk is short, later experience teaches that to expose the lower part of the facial canal by the removal of the overlying bone is the quickest and surest way of obtaining a proper length of facial trunk. The amount of bone removed is small and there is no resulting deformity.

RESULTS

Immediate—1 Mortality absent and shock very slight.

2 A well-marked paralysis of the hypoglossal nerve was present in the first three cases, with disturbed phonation and deglutition. These disturbances disappeared after from six to ten weeks, though moderate unilateral atrophy of the tongue persisted.

In the fourth, sixth and seventh cases the evidence of hypoglossal damage was very slight and showed only by the least deviation of the protruded tongue to the paralyzed side.

3 Each case healed by primary union. The scar was small and not very noticeable.

Remote—1 A moderate hemiatrophy of the tongue has persisted in Cases 1, 2 and 3, though in each case the power to move the tongue in all directions has returned and the patients are conscious of no inconvenience. In Cases 4 and 6 after three months and in Case 7 after two months there appeared some atrophy of the tongue on the paralyzed side, but without loss of voluntary control or sensible inconvenience to the patient. The explanation of this delayed atrophy is not yet clear.

2 Voluntary motion to a very satisfactory degree has returned in Cases 1, 2 and 3. In Case 1, because of the unsatisfactory conditions found at operation, but little was to be hoped for, and yet by faithful attention to the details of after-treatment the patient has made such progress in twenty-five months that nearly complete return of power is to be expected ultimately (Figs 1-16).

Case 2 made rapid progress toward the return of power between the fourth and sixth months, after which time she disappeared from observation and could not be located again (Figs 17-20).

Case 3, without paying any attention to after-treatment, came back at the end of thirteen months with a considerable return of voluntary control over the face (Figs 21-26).

Case 4, though paralyzed for twelve years and with badly atrophied muscles, yet showed beginning return of power around the chin and corner of the mouth at the end of five months, and this power is steadily though slowly increasing and extending (Figs 27-32).

4 In reading the proof of this article we are able to add the following memorandum: February 12, one year after operation the patient was seen again. Distinct voluntary motion has appeared in the muscles of chin, lower lip and about the angle of the mouth.

5 Dr. Chas. H. Frazier of Philadelphia and Dr. A. B. Ducl of New York each made this suggestion in conversation with the authors.

Case 6 at the end of ten months, had not shown any return of voluntary power (but see Footnote 4 in this connection)

The improvement in the face after the nerve anastomosis follows certain interesting lines. First, the patient notices in from three to six weeks, that the eye of

those cases where the muscles have markedly atrophied during a prolonged palsy. During this period the strength of galvanic current required to cause contraction in the facial muscles when the electrode is placed over the nerve anastomosis steadily decreases.

Third, in from five to eight months, voluntary motion



Fig 9 — Case 1 Thirteen months and three weeks Improved smile



Fig 10 — Case 1 Thirteen months and three weeks Tongue voluntarily protruded to left



Fig 11 — Case 1 Twenty five months Improved elevation of angle of mouth in smiling, showing teeth and gums on right side



Fig 12 — Case 1 Twenty five months



Fig 13 — Case 1 Twenty five months Elevation of lower lip, accentuation naso labial fold



Fig 14 — Case 1 Twenty five months Closure of eye. Marked movement in face and chin muscles



Fig 15 — Case 1 Twenty five months Beginning motion in right frontalis muscle



Fig 16 — Case 1 Twenty five months Motion in right corrugator supercilii muscle



Fig 17 — Case 2 Two weeks after operation, showing deviation of tongue to right (paralyzed) side



Fig 18 — Case 2 Four months after operation, showing protrusion of tongue nearly normal



Fig 19 — Case 2 Six months after operation In attempt to show teeth the normal side is so strong as to pull the paralyzed (right) side of the face over



Fig 20 — Case 2 Six months Volitional movement of right (paralyzed) side of face alone showing separate control of it

the paralyzed side feels more comfortable and that lacrimation is less annoying.

Second, in from six to twelve weeks, the patient and friends notice that the face is less asymmetrical in repose and, in from three to five months after operation, almost perfect symmetry in repose is present, except in

appears, first about the corner of the mouth and in the chin, and then later extends to the muscles above, involving, last of all, the eyebrow and forehead muscles. It is worthy of note that improvement continues over a very long period of time. After twenty-five months

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Case 1 is still adding to the number of muscles as well as the range of motion under his control.

The results thus far reported by various authors (see footnote on page 862) place the relief of facial palsy by nerve grafting among the standard surgical procedures

divided nerves (divided in part or in whole) and the lateral implantation method, (c) the choice of time after the onset of the paralysis when the operation should be done

(a) Until 1902, in the great majority of cases, the



Fig 21 — Case 3 Before operation



Fig 22 — Case 3 Before operation



Fig 23 — Case 3 Thirteen months after operation, showing power to protrude tongue to left (normal) side.



Fig 24 — Case 3 Thirteen months after operation. Face symmetrical at rest.



Fig 25 — Case 3 Thirteen months. Complete closure of right eye, some action of right corrugator supercilii and marked voluntary movement of right side of face



Fig 26 — Case 3 Thirteen months. Dimpling of chin, and face movements dissociated from those of eye and forehead, showing separate control



Fig 27 — Case 4 Before operation. The pouching of the left side of the face is due to a very considerable atrophy of the muscles



Fig 28 — Case 4. Before operation. The pouching of the left side of the face is due to a very considerable atrophy of the muscles.



Fig 29 — Case 4 Before operation. The pouching of the left side of the face is due to a very considerable atrophy of the muscles



Fig 30 — Case 4 Eleven months after operation. Very slight improvement in the symmetry of the face at rest.



Fig 31 — Case 4 Eleven months. Showing marked voluntary dimpling of chin and elevation of lower lip



Fig 32 — Case 4 Eleven months. Protrusion of tongue in straight line.

DISCUSSION OF METHODS

The chief questions open to discussion relate to (a) the choice between the spinal accessory and the hypoglossal nerves as the source of new power for the facial, (b) the choice between the end-to-end suture of the

spinal accessory nerve was used, but since that time most operators have turned to the hypoglossal as a more satisfactory source of power

In all the "accessory" cases noted, there have been associated movements between the shoulder and the face

muscles which have resulted in unsightly grimaces and distortions. Ballance and Stewart and some others report that, after a long interval of time, patients can dissociate the two groups of movements by persistent effort and re-education of the cortical centers. This objection, therefore, is somewhat less valid than it was primarily supposed to be.

During the last three years the hypoglossal has chiefly been used to innervate the facial because of the more intimate relations, both anatomic and physiologic, of their centers in the cortex, as well as in the medulla. Moreover, the muscle fields of these two nerves are most intimately correlated in their activities.

The advantages, indicated by these theoretical considerations, seem to be derived in actual practice from the use of the hypoglossal nerve, if one judges by a comparison of the reported results in the two series of cases. Moreover, Ballance and Stewart, who report the largest number of "accessory" anastomoses, state that in future they shall use the hypoglossal nerve.

The theoretical considerations certainly would seem to favor transverse section of whichever nerve is chosen, followed by end-to-end suture of its proximal stump to the distal portion of the paralyzed facial. One would expect a more rapid and complete nerve regeneration and a corresponding improvement in the muscle-field. Moreover, the period of re-education of the cortical centers would be presumably diminished, since they would attend only to the demands of one muscle-field, instead of dividing responsibility, as they do in cases of lateral implantation.

However, in the cases reported, the results have shown no material advantages in favor of the end-to-end suture, which, on the contrary, has certain decided drawbacks. Whether the accessory of the hypoglossal is used, there is complete and permanent paralysis of the corresponding muscle-field. When the accessory is used, the trapezius and sternomastoid or trapezius alone (according as the whole or only the trapezius portion of the nerve is divided) are paralyzed, soon atrophy, cause drop shoulder and a marked asymmetry which is especially conspicuous in women wearing low-cut gowns.

Where the hypoglossal is cut, the difficulties with phonation, mastication and deglutition noted in the early weeks of our cases must become permanent, although the patient may so adapt himself to his new conditions as to avoid much of the discomfort incident to his disability. To justify itself, this method must show very distinct advantages over others in results, and, as previously stated, it has failed to do so in the cases reported up to date (January, 1906).

On the other hand, the lateral implantation method causes the minimum of additional damage to the patient, and the results have been very satisfactory in nearly every case (see especially Figs 1-16). The technical difficulties of this operation are slightly greater.

To those who prefer the transverse section, followed by end-to-end suture, the suggestion is made (Taylor) that the distal end of the accessory or hypoglossal, whichever may be used, be anastomosed by lateral implantation into the nearest spinal motor nerve root. This would add but little to the time and difficulty of the operative procedure and would save the corresponding muscles from permanent paralysis.

(c) The interval of time which should be permitted to elapse between the onset of paralysis and the operation is the subject of wide diversity of opinion among authors.

The minimum interval mentioned is four months (Spiller and others), while many think that at least a year should elapse. Other things being equal, everyone must agree that the early operation has all the advantages. The one reason for conservatism is the great possibility of spontaneous recovery. Until the study of a large number of cases shall give us a method by which an early prognosis may be arrived at with a considerable degree of precision, there can be no scientific basis for the selection of these cases for operation.

For present purposes an interval of a year might be allowed, for by that time returning motion would have appeared in the vast majority of cases where spontaneous recovery would occur. In cases where the nerve is divided and perhaps a segment removed, as in gunshot injuries, operative procedures, etc., obviously the anastomosis should be done at once.

On the other hand, there is no fixed time during the course of a paralysis after which nerve anastomosis is contraindicated, for cases are reported where returning power has followed anastomosis after the paralysis has persisted from twelve to twenty-nine years. As long as the paralyzed muscle tissue has not completely atrophied and entirely changed to connective tissue there is a possibility of success.

In every case, regardless of other considerations, both before and after operation, the paralyzed muscles should be kept in the best possible condition by means of massage, electricity, etc., in order that returning nerve power may find good muscle to work on.

The literature of the subject to which we would refer is as follows:

- 1 C. A. Ballance H. A. Ballance and Purves Stewart *British Medical Journal*, May 2, 1903
- 2 Ballance and Stewart *Healing of Nerves*
- 3 Faure and Foret *Gazette des Hôpitaux*, March 8, 1898
- 4 Barrago Clarella *Il Policlinico*, February, 1901. Reviewed in *Centralbl f Chir*, vol xxxiii, p 718 1901
- 5 Manasse *Archiv f klin Chir*, vol lxi p 805 1900
- 6 Kennedy *Philosophical Transactions of the Royal Society*, series B vol xciv, pp 127 162
- 7 Breavoline *Travail Neur Chir*, p 92, 1901
- 8 Hackenbruch *Bericht über die Verhandlungen der Deutsch Gesell f Chir*, Kongress vol xxxii, 1903, p 46. *Archiv f klin Chir*, vol lxi, pp 631 638, 1903
- 9 Gluck *Centralbl f Nerven und Psychiat*, vol xxvi, pp 404-409 1903
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Rest in Inflammation—Physiologic rest is of infinite importance and is always indicated in acute inflammation. In the exercise of function blood is taken to a part and an existing inflammation is aggravated.—Brainard, in *Journal Michigan State Medical Society*

A CLINICAL STUDY OF MIXED INFECTION IN TUBERCULOSIS

PRELIMINARY REPORT *

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One of the many debatable questions in tuberculosis is that of mixed infection. Some observers account for nearly all elevations of temperature which pass beyond a very moderate limit as being due to a mixed infection. Others, on the contrary, question whether the advent of other bacteria into the field of tuberculosis has anything to do with the production of the fever, even that of the hectic type.

Many bacteria besides the tubercle bacillus are found in tuberculous sputum. The various pus organisms, especially the streptococci, are commonly present. That these various organisms are found in the sputum is not sufficient ground for associating them with the tuberculous process, for they may have come from the mouth, throat or other portions of the respiratory tract. To obviate this possibility of error Pfeiffer¹ suggested that the particles of sputum for examination be taken from the center of the mass of sputum. Kitasato even went further and washed the sputum mass in sterile water before the sample for examination was taken.

Other observers, as Petruschky,² Fraenkel³ and Schroeder and Naegelsbach,⁴ examined the blood to see if it contained the organisms. These examinations usually proved to be negative. It is only rarely that the various organisms mentioned in connection with tuberculosis are found in the blood, and when found it is usually in the blood taken after death, and it is highly probable that they passed into it during the hours immediately preceding death.

Still other observers, as Ortner,⁵ Sata,⁶ Schabad,⁷ Cornet⁸ and Kitasato,⁹ made cultures from the walls of cavities after the death of the patient. In some instances these cultures were taken almost immediately after death, to prove that the organisms were there during life and that they had not come from other parts of the air passages after the death of the patient.

This method revealed about the same varieties of organisms as were found by the examination of the sputum. The pus organisms, especially streptococci, were most commonly found. Staphylococci, pneumococci, influenza bacilli and pseudo-diphtheria bacilli were pres-

ent less commonly. In some instances no other organisms than the tubercle bacillus were found.

The important fact to be borne in mind in these observations is that these various organisms were found not only in the air passages and cavities present, but also in the lung tissue beyond, some, as Ortner, even noting them in the tissues which had not yet been invaded by the tubercle bacillus.

Some idea of the frequency with which other organisms associate themselves with the tuberculous process may be gained from the following. Ortner found an organism which he named micro-coccus-pneumoniae, but which later proved to be a streptococcus in twenty-eight out of forty-two examinations. Pasquale¹⁰ found streptococci in the sputum every time in eighty-two cases. Schroeder and Mennes,¹¹ in twenty-one cases of tuberculosis in all stages, made thirty examinations of sputum and found streptococci twenty-nine times, staphylococci seventeen times and pneumococci fifteen times.

The important question to decide is what part these various organisms, which are found in so large a percentage of the cases of advanced tuberculosis, play in the pathologic processes present.

The mere presence of these organisms in the sputum, cavities and tissues of the lung does not prove that they play a part in the destructive process, however, the clinical picture of what is usually termed a well defined case of mixed infection, with its chills, "hectic" temperature, profuse sweats and general prostration, is similar to that of a severe streptococcal infection. The various culture products made from the tubercle bacillus will produce, for the most part, these same symptoms, and this makes it very difficult for us to decide whether the severe symptoms accompanying so-called mixed infection are due to the tubercle bacillus or the accompanying organisms or to a combined action of the two. The necrosis and liquefaction which accompanies the tuberculous process could also be produced either by the tubercle bacillus alone or by other organisms or by a combination of them. Some claim that the destruction produced by the tubercle bacillus and its toxins is always a dry process, and that when we find a purulent discharge it shows that pus organisms, especially streptococci, have entered the field, while others, as Meissen,¹² say there is not a single symptom or condition present in so-called mixed infection that could not be produced by the tubercle bacillus alone. Those of us who have had considerable experience with the use of tuberculin and other culture products and have had the opportunity to study the physiologic effects of this remedy, as seen in the tuberculin reaction, can readily believe this statement. There is some difference, however. When we have a tuberculin reaction the patient experiences aching of the limbs, back and head, more or less severe, which closely resembles the symptoms accompanying la grippe and which is not so common in cases of so-called mixed infection. There is also a certain nervousness accompanying and preceding this aching which is not usual in the so-called mixed infection.

Having had considerable experience with tuberculin we were inclined to lay little stress on the effect of other bacteria, and believed that the hectic fever of phthisis, with its accompanying symptoms the same as that of less degree, was due to the absorption of the tox-

* Read at the International Tuberculosis Congress Paris, Oct. 27, 1905.

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9 Kitasato. Gewinnung von Reinkulturen der Tuberkel bacillen und anderer pathogener Bakterien aus Sputum. Zeit. f. Hygiene, 1892, vol. II, No. 3.

10 Pasquale. D. Streptokokk bei d. tuberk. Infekt. Zt. f. B. u. p. vol. xvi, p. 114.

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12 Meissen. Beiträge zur Kenntnis der Lungentuberkulose. Wiesbaden, 1901.

ms of the tubercle bacillus together with certain products of destroyed tissue

In the winter of 1903 our attention was called to the beneficial effect of streptolytic serum in cases of streptococcal infection, and it was determined to use it in cases of so-called mixed infection in phthisis to see if it would have any effect on the temperature. Its use was limited to cases in which the streptococci were found in the sputum, taking the sample according to Pfeiffer's method, after having had the patient rinse the mouth thoroughly before furnishing the sample. Ten patients in all were treated and the serum was advised in two other cases in consultation. The serum was used subcutaneously, usually beginning with 20 c c and following with 10 c c a day. In several of these cases the injections were continued until the streptococci disappeared from the sputum, while in others they were stopped on account of the severe reactions which followed. In some instances the urticaria was very severe, in others severe pains manifested themselves in the joints, while in still others purpura developed. In one case a cyanosis appeared and a fatal outcome was feared, but after a few hours the patient was restored to her normal condition and no bad effects seemed to follow.

These results were very encouraging, in spite of the severity of the accompanying symptoms. When the treatment could be carried out for a satisfactory period there was a diminution, and in several instances an entire disappearance of the streptococci. Simultaneous with the disappearance of the streptococci in several instances there was an abatement of the symptoms. The fever lowered, the chills ceased and the patient began to improve. There was a change in the character of the sputum in all cases. It became thinner, less in amount and less purulent in character. In some cases, in spite of the diminution and disappearance of the streptococci, the symptoms did not abate. In these cases we were inclined to believe that perhaps the continuation of the fever was due either to the toxins of the tubercle bacillus or the absorption of necrotic tissue.

This experience led us to believe that this remedy had a specific action on streptococci. While all our patients were not relieved of their troublesome symptoms, yet there were sufficient successes to be more than suggestive of the value of the remedy. The great drawback to its administration, however, was the severe reaction manifested by such conditions as urticaria, pains in the joints and purpura. On this account we ceased using it until we learned that it could be given by the bowel. Since then we have taken up its administration again.

Certain investigators, as Ortner, Cornet and Spengler, demonstrated that streptococci are found not only in the sputum and the cavity contents, but also within the lung tissue beyond the areas of necrosis. It was also found that the association of these bacteria was not always productive of temperature.

The following questions suggested themselves

1 Are the symptoms accompanying so-called mixed infection due to the presence of other organisms, especially the streptococcus, as is generally believed?

2 If the streptococcus is responsible for these symptoms it must be present before they manifest themselves, and would it not be the part of wisdom to treat mixed infection before these threatening symptoms appear?

3 If the streptolytic serum is active against the streptococcus, by its administration in cases where streptococci have not been found in the sputum, or in cases where they might be found, yet are producing no symptoms commonly attributed to them, we might be able to

demonstrate whether or not there is an early mixed infection without marked symptoms and also to gain some idea as to what part the streptococcus plays in the pathology of the disease.

In order to throw light on these important questions we have carried out a series of experiments on twenty patients at the Pottenger Sanatorium for Diseases of the Lungs and Throat. The injections were all given by the bowels and produced no inconvenience, except in one case there was some soreness of the finger joints. We hope to carry on our investigations during the coming year, but believe that our results so far warrant this preliminary report. We make it in the hope that it may stimulate others to investigate this important subject. A study of the varieties of streptococci which complicate tuberculosis shows them to be of very low virulence. The use of cultures from these sources might produce a serum which would be more active against these low-grade cocci than that produced by the ordinary virulent germ, and we would suggest its trial.

The results of our use of the serum are shown in the table. In presenting these cases we will state that those who had been in the sanatorium for a period of time before beginning the use of streptolytic serum had received such treatment as had seemed to be indicated, and during the administration of the serum in all cases such other treatment was administered as seemed best. The serum was administered to all cases daily, *per rectum*, between and including the dates given.

In selecting cases all excepting the last two in the table had a temperature range of 100 or more.

The twenty cases reported herewith were selected from ninety-seven cases under treatment in the sanatorium from March 20 to August 1, 1905, and included the most unfavorable as regards final recovery, although some of those which terminated fatally were most pronounced in responding to the action of the serum by showing amelioration of the symptoms attributable to the streptococcus.

The findings by the microscope have been disregarded in this report. Streptococci were found in the sputum in a number of cases before beginning the use of the serum and were not found subsequently, but the investigations were undertaken depending solely on clinic data.

Believing that streptolytic serum does have at least a certain degree of specific action in streptococcal infection, we endeavored to note the effect on the symptom and clinical course of the disease which followed its administration. It will be noted that in nearly every case there was a change in the sputum. It became thinner, less purulent and usually diminished in amount. Some of our cases had been in the sanatorium for some time but were not doing well, others were cases which had just been admitted, but were in bad condition. We had hoped to try it also on favorable cases, but did not in these experiments. There was an improvement noted in the general condition of 17 or 85 per cent of those treated.

It might be argued that this improvement was due to the hope aroused by the treatment, but such was not the case, for many of the patients had been under treatment and had had many things done for them, others positively objected to the treatment because of the annoyance, while none knew what we expected to accomplish so the mental stimulus can safely be eliminated.

The administration of foreign serum has some stimulating properties and will sometimes aid the organism in throwing off the disease and might have had some influ-

CASES ILLUSTRATING USE OF STREPTOLYTIC SERUM

Brief History Time of Admission	General Condition Beginning Use of Streptolytic Serum	Time Serum Used and Dose	Results
Case No 1—Admitted Mar 3, 1905 Third stage involvement, extensive areas in both lungs, also involvement of larynx, pharynx and digestive tract Temperature range to 104 Symptoms of marked general infection	Some amelioration of severe symptoms, temperature range less expectoration less in quantity continued tenacious and purulent, temperature 102.5	Mar 20 to Apr 2, 10 c c	Expectoration somewhat lessened in amount thinner and raised with less effort, temperature range slightly decreased, some apparent amelioration of general symptoms Patient discharged unimproved
Case No 2.—Admitted Jan 9, 1905 in advanced stage, both lungs involved	Condition of lungs improved temperature range continued to go above 100 at frequent intervals, expectoration profuse and tenacious	Apr 15 to May 3, 10 c c	Sputum became thinner and lighter in color less purulent range of temperature less general condition improved Patient discharged improved
Case No 3—Admitted Feb 22, 1905 In advanced stage	Had shown practically no improvement since admission	Apr 15 to May 20, 10 c c	Condition of patient during stay at sanatorium improved but slightly
Case No 4—Admitted February 1904 In second stage also lupoid involvement of anterior nares extending to upper lip, soft palate pharyngeal wall, epiglottis and arytenoids	Had treated since admission with culture products and violet rays Susceptibility to culture products very marked Temperature range above 100 frequently, condition of lungs and lupoid patches much improved	Apr 15 to Apr 17, 10 c c	Swelling and aching of joints manifest Serum discontinued
Case No 5.—Admitted Mar 18, 1905 Second attack, marked involvement of upper portion of both lungs and intestinal tract temperature 103	Marked improvement, temperature range above 100 frequently, expectoration profuse and tenacious	Apr 15 to May 3, 10 c c	Expectoration thinner, less purulent and less in quantity, subsequent improvement more rapid
Case No 6—Admitted Feb 10, 1905. Advanced stage in lungs and intestinal tract	Improvement of general symptoms temperature range above 100 expectoration profuse and tenacious	Apr 15 to May 3, 10 c c May 8 to June 6, 10 c c July 7 to July 30, 20 c c	Sputum decreased, became thinner and less purulent. Following use of serum the first time, there was marked general improvement, which continued for several days, when it was again used with more marked improvement Following its use the third time with larger dosage, improvement was still more marked and continuous
Case No 7—Admitted Feb 23, 1905 Involvement of both lungs previous history of severe pleuritis with effusion infiltration arytenoids	Had made marked improvement since admission severe attack of pleuritis and effusion, left side, developed	May 3 to May 23, 10 c c May 6 to June 5, 10 c c	Amount of sputum markedly decreased, thinner and less purulent General condition much improved
Case No 8.—Admitted May 5 1905 Advanced stage both lungs temperature had been ranging as high as 105 expectoration profuse and purulent from large cavities general symptoms of severe infection		June 21 to July 5, 20 c c.	All symptoms greatly improved, expectoration became thinner, less purulent, much less in amount and was raised much easier, temperature dropped to less than 100 F Progress satisfactory, until extensive breaking down of left lung which was followed by death of patient. Improvement appeared most marked during the use of streptolytic serum
Case No 9—Admitted Apr 31, 1905 Had been treated the year previous with marked improvement large cavity in left lung, also involvement of right lung larynx involved	Marked improvement temperature above 100 at frequent intervals expectoration profuse and tenacious	May 23 to June 20, 10 c c June 20 to June 27, 20 c c	Expectoration decreased thinner and less purulent general condition improved more rapidly than before administration of serum maximum temperature 99.5
Case No 10—Admitted May 16, 1905 Advanced stage both lungs extensive fibrosis high range of temperature reaching frequently 104		May 22 to June 7, 10 c c	Expectoration less in amount and less purulent, rapid amelioration of all symptoms general improvement until June 7, when severe hemorrhage occurred, followed by death one week later
Case No 11—Acute tuberculosis temperature ranged as high as 105 other symptoms of very virulent infection, large cavity in right lung and involvement throughout both lungs, larynx and intestinal tract expectoration purulent, exceedingly profuse and offensive		May 27 to June 20, 20 c c.	Rapid improvement of all symptoms including diminution in quantity of sputum and lessening in its offensive character June 20 a cavity formed in left lung general re-infection Patient died three days later
Case No 12.—Admitted May 18, 1905 Advanced stage temperature 104.2 general condition showed marked infection	Marked improvement in general symptoms, temperature still 100 to 101 almost daily	May 28 to June 20, 10 c c June 20 to June 28, 20 c c	Amount of expectoration markedly decreased, less purulent and less tenacious temperature range lower and general condition improved
Case No 13—Admitted Aug 30 1904 Advanced stage	Had made marked improvement under treatment, range of temperature 100 to 101 at frequent intervals	June 4 to June 20, 10 c c June 20 to June 29, 20 c c	Sputum less in amount and less purulent temperature range lower and improvement more rapid after beginning use of serum
Case No 14—Admitted Mar 10 1905 Advanced stage temperature 98 to 100	Condition improved range of temperature from 97 to 99.5 expectoration profuse, purulent and tenacious	June 11 to June 23, 20 c c	Sputum less in quantity, thinner and less purulent, temperature range lower, nutrition improved
Case No 15—Admitted June 13 1905 Advanced stage both lungs involved, extensive infiltration and ulceration of pharynx larynx and arytenoids also involvement in digestive tract temperature range 101.2 expectoration profuse heavy and purulent		June 14 to June 30, 20 c c	Sputum less in amount, thinner, less purulent and raised with less effort, temperature range lower symptoms generally ameliorated June 30 tubercular meningitis supervened death in thirty six hours
Case No 16—Admitted July 1 1905 Extensive involvement of both lungs longstanding extensive fibrosis temperature range 99 to 102 expectoration profuse tenacious and purulent.		July 7 to Aug 1, 20 c c.	Expectoration less in amount thinner and less purulent temperature range lower improvement in general condition slight
Case No 17—Admitted June 2, 1905 Third stage involvement both lungs temperature range 99 to 103.8 expectoration profuse purulent and tenacious		July 7 to Aug 1, 20 c c.	Expectoration less, thinner, less purulent, general condition much improved
Case No 18.—Admitted July 20, 1905 Third stage involvement both lungs also larynx temperature 103 expectoration profuse tenacious and purulent		July 20 to July 30, 20 c c	Expectoration less in quantity, thinner, less purulent, reduced temperature range
Case No 19—Admitted Aug 19 1904 Third stage involvement with cavities upper lobe both lungs	Condition improved temperature range below 100 expectoration profuse, very tenacious and purulent	Apr 15 to May 3, 10 c c May 28 to June 20, 10 c c June 20 to June 8, 20 c c	Expectoration following first administration reduced in quantity, thinner and less purulent same condition noted following its use the second time, more marked following increased dose improvement continuous
Case No 20—Admitted Dec 27 1904 Advanced stage also laryngeal involvement	Conditions of both lungs improved slight improvement of larynx, expectoration profuse, tenacious and purulent temperature range 98 to 99	July 8 to July 23, 20 c c	Expectoration less in quantity thinner and less purulent general condition showed marked improvement and has since continued

ence on the general improvement, but it could hardly be expected to have influenced in so marked a degree the character of the expectoration. It seems to us that such an influence can come only through some specific action on the elements productive of the expectoration.

From our studies and observations we would draw the following conclusions:

1 The results of various investigations show that streptococci are found in lung tissue beyond the areas of necrosis, and can be present without causing any acute symptoms, such as high fever, chills, etc.

2 The products of the tubercle bacillus are capable of producing symptoms very near, if not identical, with those of so-called mixed infection, and it is possible that these are sometimes due to the one cause, sometimes to the other, and perhaps at times to both working together.

3 That the streptococcus plays a part, at least in some cases of so-called mixed infection in tuberculosis, and that streptolytic serum has at least some specific action on the streptococcus as witnessed in the reduction of fever and abatement of symptoms in some of these cases of hectic type, and further, that the streptococcus plays some part in the general pathology of the tuberculous process of those chronic cases without marked symptoms (the earlier ones we have not yet investigated) as is shown by the altered character of the sputum, becoming thinner, less purulent and diminished in amount, and in the general improvement which follows the administration of the serum in nearly all cases.

4 The use of streptolytic serum in cases where no acute symptoms were present seemed to exert a favorable influence on the course of the disease sufficiently often to suggest that the presence of the streptococcus affects the tuberculous process unfavorably, even in many cases where it causes no active symptoms, and that mixed infection is a factor to be recognized and dealt with, before the advent of threatening symptoms, the same as tuberculosis is to be diagnosed and treated before the advent of consumption.

5 This field is worthy of further study and investigation, and while we do not feel justified in drawing any absolute conclusions, we feel that our results so far warrant a continuation of our investigations.

AUTOLYSIS

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(Continued from page 778)

Before concluding the review of the products resulting from proteid cleavage in the process of autolysis mention has to be made of the formation of plasteins. From the foregoing discussion it is apparent that great activity has been displayed in the study of degradation of the proteid molecule within the body and in the test tube, and an attempt has been made to explain the bearing the work had on our understanding of various physiologic functions. However, there was one great problem which inspired many workers in their labors and which remains unsolved by them. This was to discover a process by which proteid, the chief tissue component, could be constructed out of its simple components, and also to discover the mechanism which the organism employs to build up tissue proteid out of those fragments which are formed in the digestive tract. It has been stated before that the first phase in proteid digestion consists in converting native proteid, which is insoluble in boiling water, into products which are

soluble both in hot and cold water. These products are termed albumose and peptone. Danilewski and his pupil, Okneff,¹⁹ were the first to make the observation that when the soluble substances are exposed to the action of rennet ferment a substance arises which is insoluble in water. This substance was termed plastein. Kurajeff,²⁰ another student of Danilewski, has shown that the plasteins are formed by the action of autolytic enzymes also. It has been shown in recent years that enzymes possess a double function. They break up complex into more simple substances and again rebuild the original substances from the fragments. Hill made this observation on the enzymes digesting starch, and Kastle and Lowenhardt²⁰ on that spitting fat. The first ferment is capable of converting sugar into starch and again starch into sugar, the second possesses the power of converting fat into fatty acids, and the acids into fat.

Attempts were made to ascribe a similar faculty to enzymes digesting proteids, and the plasteins were regarded by many investigators as reconstructed native proteid. The most emphatic supporter of this theory was Herzog.²¹ He based his assumption on a very ingenious experiment. The viscosity of a dilute of native proteid decreases in course of digestion. On the other hand, the viscosity of a fairly concentrated solution of albumose exposed to the action of digestive enzymes increases. This, according to Herzog, may be explained by the reconstruction of proteid. However, if the digestive action of the enzyme is disturbed by the presence of an antiferment, the reconstruction fails. Very recently Kurajeff and his pupil, Grozman,²² exposed digested plasteins to the action of autolytic enzymes and noted the formation of coagulable proteid, and they seem inclined to believe that this indicates a reversible action of the autolytic enzymes. Unfortunately the experiments of various writers on the subject contain many contradictions. While the primary albumoses are considered the mother substance of plasteins by some writers, Kurajeff noted the formation of plastein only from the secondary ones. Further, Bayer,²³ in Hofmeister's laboratory, found that plastein is formed from crystalline cleavage products.

In our own experiments, Stookey and I failed to find any evidence of reconstruction of the lower albumoses into coagulable proteid. By the action of rennet ferment on albumose it was possible to convert the solution into a solid jelly, which was very difficult to fractionate for purely mechanical reasons. If, for the experiment, a solution of albumose of moderate concentration was employed, it turned into a very thick syrup. In the original solution and the one treated with rennet the various albumoses were estimated. The time of treatment with rennet varied from 12 to 48 hours. In no instance was there observed any diminution in the quantity of the lower albumose or of the peptone. Thus there was no evidence of reversion of peptone into coagulable proteid, and it is extremely improbable that enzymotic synthesis of proteid can be made possible before the substances at present known as proteolytic enzymes are divided into their components. Cleavage of proteids by trypsin, pepsin or other proteolytic enzymes is a very complex process. Reversibility of action thus far is known to be a property of enzymes affecting a hydrolytic cleavage. In the course of proteid

19 Malv's Jahresh, vol XXV

20 Amer Chem Jour, vol XXIV, 1901

21 Zeltsch f phys Chem, vol XXIX, 1903

22 Hofmeister's Beiträge vol V, 1905

23 Ibid, vol IV, 1904

disintegration in the tissues and in the digestive tract, the primary products so rapidly suffer further metamorphosis that reversion on a large scale is scarcely imaginable. There might be other synthetical processes to which the organism resorts for the purpose of tissue construction.

It has already been stated that special attention has been directed to the study of the products of autolysis of nuclear material. Through the work of Fischer, it was established that the components of nucleic acid were closely related one to another and all of them, in turn, related to uric acid. In addition, the pathogenesis of many diseased conditions, and particularly that of gout, is closely associated with uric acid. Normally fresh organs contain the components of nucleic acid in a free state only in a very insignificant quantity. Schutzenberger, Salomon and Lehmann (the last working under Kossel) observed that yeast suspended in water and allowed to stand at body temperature gave rise to free nuclein bases, the fresh cells not containing the substances in a free state. Salkowski and his pupils, Schwiening and Biondi, made it certain that the appearance of the substances was due to an autolytic process. More recent investigations have made it clear that through autolytic action purin bases, as soon as they become detached from the complex molecule of nuclein, suffer complete decomposition. Statements to that effect were made by earlier observers, more recently by Kutscher. The observation of Dakin²⁴ is in harmony with this statement, although he could detect in autolyzed kidneys only one purin base, hypoxanthin. The correctness of the statements was demonstrated by my own investigations. Quantitative analysis of all purin bases present in the fresh and in autolyzed organs has made clear the destruction of nuclein bases in the course of self-digestion. Very recently also some information has been gained regarding the chemical process of their disintegration.

In living tissues only adenin and guanin are present in large quantities, while the other two purin bases are found in very insignificant quantities. Walter Jones²⁵ and I,¹⁷ independently of one another, have shown that in the course of autolysis, these two bases are transformed into hypoxanthin and xanthin, respectively. The following table shows the contents of purin bases in 5 pounds of fresh and autolyzed spleen.

	Fresh spleen.	Self-digested spleen
Adenin	1.85 gm.	0.0 gm.
Guanin	1.10 gm.	0.0 gm.
Hypoxanthin	0.30 gm.	1.2 gm.
Xanthin	0.40 gm.	0.150 gm.

Schittlhelm arrived at similar conclusions and has demonstrated further that under certain conditions the bases are transformed into uric acid. The other constituents of nuclein acid, the pyrimidin bases, undergo analogous changes.

The mechanism of this transformation was elucidated by the work of Jones.²⁵ This author accepts the presence in the tissues of two specific enzymes, one capable of acting on guanin and the other on adenin, and further of an oxidizing enzyme, the function of which it is to complete the transformation of nuclear material. The deductions of Schenck²⁶ are similar to those of Jones. Schittlhelm²⁶ has corroborated in a general way the conclusions of Jones. However, he does not support the assumption of the existence of more than

one enzyme which can transform the amino-purins into the corresponding oxy-derivatives. According to Schittlhelm, the entire nuclear destruction is accomplished by three enzymes, one breaking up the nucleic acid into its components, the second splitting off the nitrogen from the nitrogenous constituents, and the third completing the oxidation of the purin derivative. It must be admitted that more detailed information concerning the intermediary products of nuclein metabolism is still wanting.

With this I wish to conclude the review of the products arising on autolysis of surviving organs. Reference should be made to the products of autolysis of sugar and fat, but thus far the investigations in that direction are few in number and the results obtained from them not very significant. This also concludes the review of autolytic action in normal organs. It remains to discuss these results in connection with the original problems which led to all these numerous investigations.

DISCUSSION OF RESULTS

It has been stated already that the principal object of the work was 1 To elucidate the nature and the mechanism of those chemical reactions which make the functions of the body possible. 2 To interpret the rôle of individual organs in the animal metabolism. 3 To study the intermediate products of metabolism, since there is a general agreement that by the accumulation in the organism of these substances many diseased conditions are occasioned.

The foregoing review leads one to the conclusion that the knowledge of intermediate metabolism has been furthered considerably. On the other hand a comparative study of the products of disintegration of various organs fails to bring out marked differences among them, although, during life at least, some organs are known to be the seat of special chemical reactions. This leads one to the assumption that in the animal body the process of self-digestion does not control all chemical reactions occurring in organs, perhaps even not all the processes of disintegration. A most conspicuous instance illustrating this statement is found in the work in which Eck's fistula was employed. By this name is designated a fistula between the vena cava and the portal vein. The aim of the fistula is to exclude the liver from the portal circulation. The organism of the dog possesses a very intense power of burning uric acid, the acid is present in the urine of this animal only in traces, even after injection of two to three grams of the substance. Dr Sweet and I have demonstrated that animals kept for weeks on a diet free from all precursors of uric acid excrete considerable quantities of it in the urine as soon as an Eck fistula is performed on them. The output is especially increased after the administration of the substance itself.

Evidently under these conditions the organism fails to disintegrate uric acid, although the process of self-digestion is not depressed in the tissues. Thus the mechanism of "burning" uric acid in the living organism is not known yet. Proteid combustion also in the normal living organism apparently is different from the proteid disintegration in the course of autolysis. The great mass of products in the process of self-digestion remains in the stage of nitrogenous acids. A small part of them lose their nitrogen and a still smaller part give rise to carbon dioxide. In the living organism the splitting off of nitrogen from proteid material is a very rapid process, and the transformation of all carbonaceous material to carbon dioxide also occurs with much

²⁴ Jour. of Physiol. vol. xxx 1903

²⁵ Ibid., vol. 31 1904.

²⁶ Zeltsech f. phys. Chem., vol. xliii 1904

greater rapidly than it possibly could take place in course of self-digestion. But it has been stated that disintegration by the process of autolysis does occur during life. This and the foregoing are not contradictory one to another. Every tissue consists of cells of different age, of different states of nutrition and of different resistance. Work on hemolysis has brought out most clearly that individual blood cells vary in their vulnerability. Cells in a state of defective nutrition succumb to the process of self-digestion. In the course of that process enzymes are liberated which are capable of digesting extraneous material also.

It is difficult to demonstrate the correctness of this view on a complex organism but it is made very clear from observations on the yeast cell. It is the function of that organism to convert grape sugar into alcohol. So long as conditions for this function are favorable there is little evidence of the process of self-digestion in a colony of yeast cells. But as soon as conditions are so altered as to make the normal life and the alcoholic fermentation impossible, a very active proteid-splitting enzyme is developed by the yeast cell which causes digestion of the cell proteid and of other proteid material. In the living organism the two forms of metabolism undoubtedly coexist. One is the result of the function of the organs, the other of their disintegration. The supply of energy required for the maintenance of life is furnished possibly by the first process. It has already been stated that by means of autolysis proteid is converted principally into amino-acids. By this conversion proteid could not furnish the organism with its full calorific requirement. On the other hand, autolytic enzymes may act on cell proteid and on the surrounding proteid in a manner similar to that of the enzymes of digestive glands, namely, rendering them a more suitable material for rapid combustion.

It is marvelous that, notwithstanding the presence of destructive agents in all tissues, organs succeed in guarding their integrity. A most clever investigation of recent years throws light on the mechanism by which this is accomplished. The integrity of the gastric wall, the function of which is to elaborate digestive enzymes, has been the cause of much speculation. Weinland²⁷ demonstrated that this was due to the presence of an antiferment in the digestive glands. In the blood also were found antitryptic substances by Hahn,²⁸ Landsteiner,²⁹ Glaessner³⁰ and Catchair.³¹ The same property was noted in tissue extracts by Dr Stookey and myself.⁷ Furthermore, we have demonstrated that tissue extracts exercise an action antagonistic to that of autolytic enzymes. However, in health the two tendencies are so regulated that the tissue disintegration is sufficient to permit the organs to perform their function, while excessive wear is avoided. But as soon as the normal nutrition of the organism is disturbed the autolytic power of tissues increases. The mere fasting of an animal suffices to occasion in the tissues an exaggerated tendency for self-destruction. This was demonstrated by the experiments of Lane-Clayton and Schryver.³¹ It has been known for years that in cases of starvation animal organs lose in weight and that the loss varies in different organs. It is not improbable that products formed by disintegration of some organs serve to support the integrity of other more important organs.

More marked is the high destructive power of tissues in diseases of a grave nature. Thus in diseases of the respiratory system and of the heart, an intense self-digesting tendency of the tissues was noted by Schlesinger. In infectious diseases a similar observation was made by Flexner.³² The work of this author preceded that of Schlesinger,³³ and is very important for the reason that it furnished an interpretation for some old observations of pathologists.

Flexner demonstrated an unusually high rate of self-digestion in organs removed from individuals who succumbed to typhoid fever and other infectious diseases. The observation on typhoid is of special interest, since the exaggerated autolysis in the course of the disease can not be ascribed to the action of the micro-organism, for it is known that the proteolytic power of that germ is very slight. That this high rate of self-digestion is not merely a postmortem phenomenon may be concluded from the old clinical observation, that products of proteid digestion are eliminated by the kidneys in the course of infectious diseases. The occurrence of peptonuria in these pathologic forms is not infrequent. Thus in the light of the new investigation, this symptom acquires a special significance. So long as the nutrition is in a sufficiently good condition to prevent wasting of the tissues of the body, pepton is not present in the urine.

However, the softening and the wasting of tissues is most striking when these are under the influence of protoplasmic poisons. For this reason the study of phosphorus poisoning has attracted great attention. Martin Jacobi⁶ first pointed out the high rate of autolysis of the organs removed from animals killed by phosphorus poisoning.

In this condition self-digestion takes place not only in surviving organs, but also during life. This may be concluded from the work of Abderhalden²¹ and his co-workers, who recently have demonstrated the presence of the crystalline components of the proteid molecule in the urine of animals poisoned with phosphorus.

The importance attached to the study of phosphorus poisoning is largely due to the resemblance which the clinical symptoms of this condition bear to that of a spontaneous pathologic form known as yellow atrophy of the liver. While the morphologic changes in the liver in the two conditions are not absolutely identical, still they present many points of similarity. The most striking are the disintegration of cellular elements and the so-called fatty degeneration of the organ. Through the work of many investigators, and particularly through that of Wakeman and Waldvogel, it has become evident that the changes which the liver undergoes in these pathologic conditions are identical with those which the organ suffers in the course of autolysis. Indeed, the fact that the liver of persons who have succumbed to yellow atrophy contains products of proteid digestion was demonstrated by Salkowski more than twenty years ago and was recently corroborated by Alonzo Taylor.³³ However, in neither of the two forms are the changes limited to one organ. Jacobi has demonstrated that the blood in phosphorus poisoning presents a striking loss of coagulability. Still more striking is the power it possesses of liquefying coagulated blood. This peculiarity was interpreted as being due to the presence of a proteolytic enzyme in the blood. In the course of yellow atrophy, products of a proteid cleavage have been

27 *Zeitsch f Biol*, vol xlv, 1903

28 *Munch med Wochst*, 1903

29 *Cent f Bacteriol*, vol xxvii 1900

30 *Hofmeister's Beiträge*, vol iv, 1903

31 *Jour of Physiol* vol xxxi 1904

32 *Univ of Penn Bull*, July, 1903

33 *Jour of Med Research*, vol viii 1902

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found in the blood by Frerichs. This has been corroborated by many investigators, and very recently Neuberg and Richter³⁴ have shown that leucin, tyrosin and lysin may be present in the blood in quantities which clearly show their origin could not be limited to the liver alone.

Thus, in the foregoing forms all tissues are apparently affected in the same manner. Marked autolysis in them may be considered a symptom of decline in general health and nutrition. However, there are conditions in which self-digestion is located in one organ only, thus the atrophy of the thymus, the involution of a puerperal uterus, are accomplished by a process of autolysis. The softening of tumors is brought about by the same mechanism. This was made clear through the work of Petry,¹⁵ who demonstrated that freshly removed tumors contain products of proteid cleavage. The same author further demonstrated that the rate of self-digestion of the new growth is higher than that of a normal tissue. An attempt was also made to study the toxicity of the products resulting from this process. However, neither from a chemical nor from a pathologic point of view could a difference between the end-products of autolysis of tumors and those of normal tissues be detected. Indeed, the intensity of self-digestion is high in all organs composed of cellular elements endowed with rapid growth.

The occurrence of local autolysis is not, as a rule, productive of a lowering in general health. On the contrary, it tends to restore normal conditions when these have been disturbed.

There are other conditions in which the process of autolysis is of aid to the organism in the efforts to maintain its integrity. It has been stated already that in the course of infectious diseases tissues possess a high power of autolysis. Investigations of Blum,¹⁴ Conradi³⁵ and Levaditi³⁶ have shown that autolysis may be one of the means to which the organism resorts in order to elaborate protective substances. Substances of two distinct groups are formed in the organism as the result of infection. Those of one group aim to destroy the micro-organism and are designated bactericidal, the purpose of the other is to neutralize the toxin elaborated by the micro-organism, these are commonly named antitoxin. Normal tissues in the course of autolysis may give rise to substances of either group.

Blum has shown that the products of autolysis of lymph glands possess the power to neutralize tetanus and diphtheria toxins and cobra venom. The mechanism of this action is not based merely on the physical properties of the autolyzed gland, for it is possible to save animals from death by injecting the products of autolysis subsequent to the injection of toxin.

Further, Conradi has tested the bactericidal power of the products of self-digestion of various organs. This author noted that the last added to a suspension of bacteria in broth, prevented their growth. The intensity of bactericidal power varied in different organs, as presented in the following table.

Muscle	Strong
Lymphatic gland	Strong
Liver	Strong
Spleen	Strong
Thymus	Marked
Suprarenal	Marked
Bone marrow	Slight
Pancreas	None
Thyroid	None

Glancing over the table, one is struck by the fact that organs rich in leucocytes are most efficient in elaborating protective substances against infection. And one is naturally led to the analysis of the rôle played by the white blood cells in the effort of the animal body to maintain its integrity. A review of all the information gained concerning the action of leucocytes on the tissues shows that this is similar to the action of the digestive tissue enzymes. A tissue invaded by the white blood cells is subject to the action not only of the local enzymes, but of those of the blood cells as well. Digestion caused by the last, strictly speaking, can not be regarded as self-digestion. However, the two processes present so much similarity that they are classified by most writers under the same head of autolysis.

The formation of proteid-digestion products through the action of leucocytes was first noted by a Russian writer, Eichwald, in 1864. The observation has been corroborated by many scientists and clinicians. Pepton has been demonstrated in pus and in the urine in all conditions associated with abscess formation. But the work that has attracted most attention and stimulated most research is that of Friedrich Muller. This author has demonstrated that in croupous pneumonia the resolution of the exudate is accomplished by a process of autolysis. The products arising in the course of resolution are identical with those occurring in proteid digestion. The mechanism of this process has been interpreted by Flexner, who, studying the intensity of autolysis in different stages of croupous pneumonia, observed that the intensity was very high in the stage of gray hepatization and very low in the stage of red hepatization, and explains this by the abundance of leucocytes in the exudates in the first condition and their scarcity in the other. Flexner also noted that in unresolved pneumonia the autolytic power is very imperfect. In this condition, as is well known, the exudate is very poor in leucocytes.

Flexner is inclined to interpret the failure of absorption of the exudate in unresolved pneumonia as being due to the disproportion between the leucocytes and the other constituents. Indeed, the correctness of the assumption that the absorption of an exudate is accomplished by the action of leucocytes was established by the work of Opie,³⁷ who has noted that a fresh exudate does not possess the same degree of autolytic power as an old one. He has also noted that the lack of self-digestion in the first is due in some degree to the presence in the serum of a substance checking the digesting action of the blood cell. The rôle of the leucocyte in the absorption of inflammatory exudates has been previously described by Ascoli and Mareschi³⁸ and by Umber,³⁹ but the details of the mechanism were not fully understood until the appearance of the work of Opie. The discovery of the substance capable of keeping in check the destructive work of the blood cell is of great value for the understanding of the process. And it is now established that in the white cell the organism finds its most active factor for repairing the damaged and inflamed tissue.

There still remains to be discussed one point in the mechanism of leucocytic action. Regarding other tissue enzymes it has been stated that the destruction of the cell always precedes their liberation. Many writers have surmised that this applies also to the white blood cell. And yet this has not been fully established. The obser-

³⁴ Deutsch. med. Wochst. No 16 1904

³⁵ Hofmeister's Beiträge vol. I 1902 vol. V 1904

³⁶ Ann. ch. Inst. Pasteur vol. XXII p 156

³⁷ Jour. of Exp. Medicine vol. VII, 1905

³⁸ Maly's Jahresh. vol. XXXII 1902

³⁹ Münch. med. Wochst. No 49 1902.

vation that in leukemia autolysis is noted during life seems to contradict the foregoing assumption. However it is possible that the dead cell exercises at least a greater digestive action than the living. Hedin¹ and Opie have demonstrated that from the white cell two enzymes can be obtained. One resembles the enzyme elaborated by the pancreatic gland, the other the autolytic enzymes. It is conceivable that the first is secreted during the life of the cell, the last liberated only after its death. It is possible also that, once set free, the autolytic enzyme increases the power of the other enzyme. An analogous action of the spleen on the pancreas has been assumed by many writers and was proven by Stookey and myself. Thus waste and repair are controlled to a large extent by the same factors.

Autolysis then is the process by which dead tissue is not only prevented from becoming a burden to the organism, but, in addition, becomes converted into useful fuel material. By the aid of these processes diseased tissues, pathologic formations and new growths are removed and replaced by normal healthy tissues. The organism resorts to this process also for elaboration of protective substances against bacteria and bacterial toxins. It still remains to be demonstrated whether or not in the course of autolysis enzymes are formed which are concerned in producing that energy which makes all animal functions possible.

AN EXAMINATION OF THE STOOLS OF 100 HEALTHY INDIVIDUALS, WITH ESPECIAL REFERENCE TO THE PRESENCE OF *ENTAMOEBA COLI*

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Numerous investigators have found amebas in the stools of healthy persons, but, since they have mostly made no distinction between *Entamoeba coli* and *Entamoeba dysenteriae*, their results can not be considered in this connection.

Schaudinn,¹ however, examining the stools of healthy individuals, demonstrated the presence of the *Entamoeba coli* in the stools of 50 per cent of those examined in West Prussia, in 20 per cent of those examined in Berlin, and in 66 per cent of those dwelling on the shores of the Adriatic.

Craig² demonstrated the presence of *Entamoeba coli* in the stools of healthy individuals in 65 per cent of the cases and in 50 per cent of the 150 cases examined of patients suffering from other than intestinal disease.

These results would seem conclusively to demonstrate the fact that the *Entamoeba coli* is an extremely common intestinal parasite and the strong probability of its innocuous nature. But while Strong,³ in an investigation carried out in the Philippine Islands, a place where we should naturally expect to find this organism at least as widely distributed as it is in the United States, found only 8 out of 200 individuals infected with *Amoeba coli* (Strong), and Musgrave and Clegg⁴ state that "all

amebas are or may become pathogenic," further observations on the *Entamoeba coli* are not out of order.

METHOD

In order to determine if it was possible to find the *Entamoeba coli* in an ordinary hard stool, a number of such specimens were examined by triturating small portions of the stool in normal salt solution with a platinum loop on the glass slide. In a number of cases this method was successful, and it is probable that the administration of salts only facilitates the finding of amebas by furnishing a ready-made liquid stool in which the amebas have become dissolved out of the hard fecal matter and become suspended in the fluid. As previous investigators have usually administered salts, however, the following method was adhered to in obtaining the 100 stools considered here. 60 c.c. saturated solution of magnesium sulphate were administered and the liquid stool examined as soon as passed.

The results obtained from this examination are classified in the following tables, but before proceeding to their consideration it should be stated that the natives examined were members of the Philippine constabulary and Philippine scouts, mostly the former, and that the white soldiers were taken partly from the Hospital Corps and partly from Companies A and D of the 20th U. S. Infantry. At the time of examination they were all stationed in the Cottabato Valley, Mindanao, P. I. The natives come from all parts of the islands, and, while a large proportion of them are Moros, they have served in other islands. The American soldiers come from 24 different states of the Union, and are, therefore, not drawn from any particular district. All of the men were in good health and on active duty at the time examined. Two of the Americans have a history of chronic dysentery several years ago. This may have been simply some form of enteritis associated with the *Entamoeba coli*. Both men are in perfect health at the present time.

The characteristics of the *Entamoeba coli* observed in these specimens as distinguished from *Entamoeba dysenteriae* are as follows:

<i>ENTAMOEBA DYSENTERIAE</i>		<i>ENTAMOEBA COLI</i>	
SIZE		SIZE	
25-30 Microns	(Not a distinguishing feature)	10-20 Microns	
SHAPE		SHAPE	
Usually some other shape		Spherical when resting	
COLOR		COLOR	
Greenish		Opaque grayish	
PROTOPLASM		PROTOPLASM	
Ectoplasm and entoplasm easily distinguished		Ectoplasm and entoplasm distinguished with difficulty	
Ectoplasm very refractive		Ectoplasm not refractive	
Ectoplasm finely granular		Ectoplasm homogeneous	
Entoplasm coarsely granular		Entoplasm finely granular	
PSEUDOPODIA		PSEUDOPODIA	
Large and easily distinguished		Entirely ectoplasm	Hard to distinguish
Contain ectoplasm and entoplasm			
VACUOLES		VACUOLES	
Many vacuoles		Vacuole absent usually	
		Never more than one	
NUCLEUS		NUCLEUS	
Often absent	When present structure of nucleus hidden except in stained specimens	Almost invariable	with well defined nuclear membrane and other structure
Nuclear membrane not well defined			
Changes position markedly		In moving organism	retains its relative position
RED CORPUSCLES INGESTED		RED CORPUSCLES INGESTED	
Many		None observed	
MOTILITY		MOTILITY	
Great progressive motility		Often absent and when present	of limited extent and short duration

These are a part of the differences observed by Craig² to exist between the two species. In this investigation no attempt was made to differentiate the two species by

1 "Arbeiten aus dem Kaiserlichen Gesundheitsamte," 1903, xix, No. 3, p. 563.

2 "Observations on Amebas Infecting the Human Intestine," American Medicine, vol. ix, Nos. 21, 22 and 23, 1905.

3 "Circulars on Tropical Diseases," No. 1, February, 1901, p. 10, Manila.

4 "Bulletin No. 18," Bureau of Government Laboratories, Biologic Laboratory, Manila, P. I.

stained specimens or by observation of the various methods of production, since the object desired was to demonstrate the presence of the *Entamæba coli* by a simple clinical examination such as is generally applied to suspected cases of amebic dysentery, at the same time reproduction of fission was observed in several cases, while reproduction by encystment was never seen

It follows as a result of these observations that not only is *Entamæba coli* often present in the intestines of normal individuals in this region, but that it is by far the most common parasite, having been found in 50 per cent of the American soldiers examined, while the next most common parasite, the *Cercomonas intestinalis* was only present in 24 per cent. of the cases In the natives the *Entamæba coli* was present in 70 per cent of the

ducing a certain disease and which is also present in from 50 per cent to 70 per cent of normal individuals The presence of *Ankylostomum duodenale*, which we know is of pathologic significance, in 64 per cent of the normal natives examined, may at the first seem to contradict this statement, but a further consideration shows this to be by no means the case The ankylostoma were, indeed, nearly as widely distributed, but were very few in number in any given case (see below), and the malevolent influence of two or three of these minute worms would be negligible It is only when present in great numbers that they cause a sufficient loss of blood to produce the anemia characteristic of ankylostomiasis

NATIVE SOLDIERS

Number	History of Dysentery	History of Diarrhea	Entamæba Coli 38 or 70 per cent	In ylo tomm Duodenale 32 or 44 per cent	Trichocephalus Dispar 27 or 44 per cent	Cercomonas 18 or 36 per cent	Ascatis Lumbricoides 10 or 20 per cent	Anquilula. 5 or 10 per cent	Tenia Solium 1 or 2 per cent
1	-	-	+	+	+	+	-	-	-
2	-	-	+	+	+	+	-	-	-
3	-	-	+	+	+	+	-	-	-
4s	-	-	+	+	+	+	-	-	-
5	-	-	+	+	+	+	-	-	-
6	-	-	+	+	+	+	-	-	-
7s	-	-	+	+	+	+	-	-	-
8	-	-	+	+	+	+	-	-	-
9	-	-	+	+	+	+	-	-	-
10s	-	-	+	+	+	+	-	-	-
11	-	-	+	+	+	+	-	-	-
12	-	-	+	+	+	+	-	-	-
13	-	-	+	+	+	+	-	-	-
14	-	-	+	+	+	+	-	-	-
15	-	-	+	+	+	+	-	-	-
16	-	-	+	+	+	+	-	-	-
17s	-	-	+	+	+	+	-	-	-
18s	-	-	+	+	+	+	-	-	-
19s	-	-	+	+	+	+	-	-	-
20s	-	-	+	+	+	+	-	-	-
21s	-	-	+	+	+	+	-	-	-
22s	-	-	+	+	+	+	-	-	-
23s	-	-	+	+	+	+	-	-	-
24s	-	-	+	+	+	+	-	-	-
25s	-	-	+	+	+	+	-	-	-
26s	-	-	+	+	+	+	-	-	-
27s	-	-	+	+	+	+	-	-	-
28s	-	-	+	+	+	+	-	-	-
29	-	-	+	+	+	+	-	-	-
30	-	-	+	+	+	+	-	-	-
31	-	-	+	+	+	+	-	-	-
32	-	-	+	+	+	+	-	-	-
33	-	-	+	+	+	+	-	-	-
34	-	-	+	+	+	+	-	-	-
35	-	-	+	+	+	+	-	-	-
36	-	-	+	+	+	+	-	-	-
37	-	-	+	+	+	+	-	-	-
38	-	-	+	+	+	+	-	-	-
39	-	-	+	+	+	+	-	-	-
40	-	-	+	+	+	+	-	-	-
41	-	-	+	+	+	+	-	-	-
42	-	-	+	+	+	+	-	-	-
43	-	-	+	+	+	+	-	-	-
44	-	-	+	+	+	+	-	-	-
45	-	-	+	+	+	+	-	-	-
46	-	-	+	+	+	+	-	-	-
47	-	-	+	+	+	+	-	-	-
48	-	-	+	+	+	+	-	-	-
49	-	-	+	+	+	+	-	-	-
50	-	-	+	+	+	+	-	-	-

WHITE SOLDIERS

Number	Months in Philippines	History of Dysentery	History of Diarrhea	Entamæba Coli	Cercomonas	Ankylostomum Duodenale	Ascatis Lumbricoides	Trichocephalus Dispar	Anquilula
1	8	+	-	+	+	-	-	-	-
2	7	+	-	+	+	-	-	-	-
3	9	-	-	-	-	-	-	-	-
4	8	-	-	-	-	-	-	-	-
5	7	-	-	-	-	-	-	-	-
6	8	-	-	+	+	-	-	-	-
7	7	-	-	-	-	-	-	-	-
8	39	-	+	-	-	-	-	-	-
9	21	-	-	-	-	-	-	-	-
10	6	-	-	+	-	-	-	-	-
11	20	-	-	-	-	-	-	-	-
12	18	-	-	-	-	-	-	-	-
13	8	-	-	-	+	-	-	-	-
14	18	-	-	-	-	-	-	-	-
15	14	-	-	+	-	-	-	-	-
16	14	-	-	+	-	-	-	-	-
17	9	-	-	-	-	-	-	-	-
18	18	-	-	+	-	-	-	-	-
19	24	+	-	+	-	-	-	-	-
20	20	-	-	+	-	-	-	-	-
21	7	-	-	-	+	-	-	-	-
22	11	-	-	+	-	-	-	-	-
23	7	-	-	+	-	-	-	-	-
24	9	-	-	+	+	-	-	-	-
25	30	-	-	+	-	-	-	-	-
26	50	-	-	+	-	+	-	-	-
27	8	-	-	+	+	-	-	-	-
28	24	-	-	+	+	-	-	-	-
29	36	-	-	+	+	-	-	-	-
30	36	+	-	+	+	+	+	+	-
31	18	-	-	+	-	-	-	-	-
32	18	-	-	+	-	-	-	-	-
33	9	-	-	+	-	-	-	-	-
34	9	-	-	+	-	-	-	-	-
35	8	-	-	+	+	-	-	-	-
36	18	-	-	+	-	-	-	-	-
37	21	-	-	-	-	-	-	-	-
38	14	-	-	+	-	-	-	-	-
39	48	-	-	-	-	-	-	+	-
40	14	-	-	-	-	-	-	-	-
41	16	-	-	-	-	+	-	-	-
42	48	-	-	-	-	-	-	-	-
43	8	-	-	-	-	-	-	-	-
44	5	-	-	-	-	-	-	-	-
45	57	-	-	-	-	-	-	-	-
46	20	-	-	+	-	-	-	-	-
47	10	-	-	+	+	-	-	-	-
48	18	-	-	-	-	+	-	-	+
49	48	-	-	+	-	-	-	-	-
50	48	-	-	+	-	-	-	-	-
Total				25 or 50%	12 or 24%	4 or 8%	1 or 2%	2 or 4%	1 or 2%

cases examined, while the next most common parasite, the *Ankylostomum duodenale*, was present in only 64 per cent

RELATION OF THE ENTAMÆBA COLI TO AMEBIC DYSENTERY

These results simply tend to strengthen the position previously taken by Schaudinn,¹ Craig² and others that the *Entamæba coli* does not produce dysentery It is true that agents which we know produce pathologic conditions may be sometimes found in healthy individuals, the resistance of these individuals being explained by their immunity or relative insusceptibility, but we know of no parasite which is accredited with the power of pro-

But perhaps the *Entamæba coli* were also present in very small numbers? This is undoubtedly true in some of the cases, especially among the Americans, but in other cases they were present in myriads Often it was very hard to find a field which did not contain two or three, and in native Case 49, I counted 39 *Entamæba coli* in a single field, and it would have been hard to find a field which did not contain from ten to twenty This from a single droplet of the stool And, besides the problem is entirely different in the two cases, for the *Entamæba coli* possesses the power of indefinite multiplication in the intestines, while the ankylostomum can only be increased in any individual by rein-

Not can we say that perhaps this man would develop dysentery later, for, although but a single specimen stool was examined from the majority of these cases, all the men have been under observation for a period of nine months and none of them has developed dysentery.

Several of the men have been examined at intervals of several months to see if the *Entamaba coli* persisted in the stool for any length of time. In Case 15 of the Americans and in Cases 13, 31 and 49 of the natives amebas were always found at each examination. These cases were selected for continuous observation, for the reason that the parasite was present in abundance and easily found when search was made. In this connection it may be remarked that Craig,⁵ in refuting the view of Musgrave and Clegg that individuals presenting *Entamaba coli* in health have never been observed for a long enough time to be positive as to whether or not dysentery might result, states that he has observed such individuals for a period of six months and has found these parasites constantly present.

CONCLUSION

The *Entamaba coli* can not be considered as the cause of chronic dysentery, since it is found as a continuous infection in about 50 per cent of all normal individuals in many localities. It follows that no diagnosis of amebic dysentery should be made by the microscopist unless he has found the *Entamaba dysenteriae* as distinguished from the *Entamaba coli*.

The *Ankylostomum duodenale* is the most important of the intestinal worms found. This parasite seems to be very widely distributed among the natives in this locality, although I have not seen a single case of typical ankylostomiasis during a period of observation lasting ten months. This is apparently because the parasites were not present in large numbers in any individual. In the majority of the natives examined two or three ankylostoma eggs could be found in a single slide after a careful examination, but they are present in much larger numbers when the parasites are abundant enough to produce anemia.

Generally the development of the embryo in the intestine does not progress beyond segmentation of the egg, but it is worth recording that in one specimen, that of Native 14, examined immediately after its passage, numerous free swimming ciliated rhabditiform embryos were seen. This stage is not usually attained until one or two days after leaving the intestine. Ova in various stages of development, including advanced periods of segmentation, and eggs containing moving embryos on the point of hatching were also found.

A point of interest in diagnosis may here be made. No case should be diagnosed as ankylostomiasis and so treated merely because a few of the eggs of this parasite are found. To do this seems to be a tendency of most practitioners who come from a region where the ankylostomum is unknown to a locality where it is frequent. It is safe to say that no case should be diagnosed as ankylostomiasis unless presenting the characteristic symptoms of this condition, combined with a large number of eggs in the stool. In this connection I would like to quote Manson,⁶ who says "It is not in every instance in which the ankylostomum is present that consequences so serious ensue. There may be dozens of ankylostoma in the intestine without any appreciable anemia, or, indeed, symptoms of any description what-

ever. Grave symptoms are the exception. One must be careful, therefore, to avoid concluding that the ankylostomum is the cause of every pathologic condition with which it may chance to concur."

The other intestinal parasites may be dismissed briefly as of little or no pathologic significance. The one case of tapeworm occurred in native No 14, who was a Filipino and not a Mohammedan, and therefore was not prevented by his religion from indulging in pork. He was entirely unaware of its presence, and had not missed a day from duty as the result of five parasites that he harbored.

This wide dissemination of intestinal parasites among the natives is, no doubt, facilitated by the universal custom of the Moros, who are Mohammedans, of defecating in the river, and the fact that, excepting the few Americans living here, it is also a universal custom to drink this river water unboiled. The number of natives infected with one or another of the parasites considered above as compared with the number of Americans infected probably furnishes some index of their relative liability to other water-born intestinal affections. Thus out of fifty natives examined there were only two in whom no parasite of any kind was found, while out of the same number of Americans twenty-one had no intestinal parasites, making the relative liability ten times as great among natives as among Americans. Or, considering the ratio of the total number of infections in the natives to the total number in the Americans, we have 428 to 45—nearly three to one. We may say, therefore, that the native soldier is between three and ten times more liable to water-born intestinal diseases than the American soldier. The native soldier in this locality uses plain river water, while the American is furnished distilled and boiled water, with occasional relapses to the unboiled water during "bikes" and in Chinese restaurants.

While, to be sure, there are other methods of disseminating intestinal diseases besides the drinking water, surely the advantages of boiled or distilled water are thus made sufficiently plain.

A CASE OF RIGHT SUBCLAVIAN ANEURISM— ATTEMPTED ENDOANEURISMORRHAPHY (MATAS)

CURE FOLLOWING SIMULTANEOUS LIGATION OF COMMON
CAROTID AND FIRST PORTION OF SUBCLAVIAN *

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A study of the classical paper by Matas¹ describing his operation for the cure of aneurism impressed me profoundly. The operation aims at the obliteration of the sac with comparatively little disturbance of the circulation of the part. After securing preliminary hemostasis by means of the elastic bandage, the aneurism is opened in the general course of the affected vessel and all of its internal orifices are closed by suture. The sac itself is then obliterated by rows or layers of sutures. In the case of sacculated aneurisms this procedure may be carried out without interfering with the lumen of the vessel itself. In fusiform aneurisms, however, it may be necessary to obliterate the affected vessel together with the sac, although in some cases the vascular lumen may be

⁵ American Medicine, vol ix, No 23, June 10, 1905, p 930

⁶ "Tropical Diseases," "Ankylostomiasis"

* Read before the Section on Surgery of the New York Academy of Medicine

¹ Matas Annals of Surg, February 1903

re-established by suturing around a rubber tube, the ends of which have been placed in the two main openings of the sac (afferent and efferent). The tube is to be removed before the final sutures have been tied. His discussion concerning the possibilities of the method in dealing with aneurisms of the larger visceral arterial trunks not situated favorably for the employment of the elastic constrictor was very suggestive, and I determined to give the method a trial should the opportunity ever present itself.

The present paper contains the report of a case in which Matas' operation was attempted and, although it records a failure, the lack of success should not be ascribed to the method, but rather to the fact that the steps were not fully carried out. The apparently complete recovery of my patient after the employment of the older operation of proximal ligation is gratifying, but it will not deter me from making another attempt to follow out the principles of Matas if the occasion should arise.

History—The patient was a Russian, 40 years old, and a tailor by occupation. He had served as a soldier in the infantry of his country. For the past ten years he had suffered not infrequently from what he called rheumatism. He stated emphatically that he had never been infected with gonorrhea or syphilis, and careful physical examination strengthened my belief in his truthfulness. For about a year there had been a stabbing pain in the precordial region, which had been pretty persistent but not progressive. In December, 1904, the precordial pain began to radiate to the right shoulder and down the right arm. Soon after this a localized swelling was noted in the right supraclavicular region and there was a general enlargement of the right arm and hand, especially noticeable in the fingers. The patient also complained of a prickling sensation in the right hand. He entered one of my wards at Mount Sinai Hospital, Feb 4, 1905.

Examination—The man's general physical condition and nutrition were good. The superficial veins over the right supraclavicular and infraclavicular regions were markedly dilated, running over the top of the shoulder. Dullness and rather high pitched respiration were noted in the right infraclavicular region. Above the middle of the right clavicle there was a hemispherical, strongly pulsating tumor, a little smaller than half a lawn tennis ball. The pulsation was distinctly expansile in character and was accompanied by a marked systolic thrill. With the stethoscope a short systolic and a short diastolic murmur could be heard. The overlying skin was not discolored, nor was it adherent to the mass. The clavicle, too, seemed to be uninvolved. The right shoulder and the entire arm and hand were slightly cyanotic and were covered with numerous minute bluish vessels. The right arm and hand were swollen so that they were considerably larger than the left, but there was little, if any, pitting on pressure. The fingers of the right hand were markedly clubbed (Fig 1). Pulsation at the right radial was somewhat delayed and was much weaker than at the left. There was no evidence of arteriosclerosis. The temporals were visible but were not abnormally tortuous.

Operation—Four days after admission, February 8, the patient was anesthetized with chloroform and an incision was made from the outer fourth of the clavicle to the sternoclavicular articulation and thence for four inches along the anterior border of the sternocleidomastoid muscle. The skin flap was dissected off, the insertion of the sternocleidomastoid was divided and the inner half of the clavicle was subperiosteally resected. A temporary ligature of chromicized catgut was thrown around the common carotid artery, but not tightened, and the vessel was then followed down to its origin from the innominate. By working carefully and keeping close to the vessel, no important nerve or vein was injured. Exposure of the innominate was excellent and ligation of this vessel would have been easy. A temporary ligature of chromicized gut was now thrown around the first portion of the sub-

clavian about one-half inch from its origin, and was held by a clamp at a sufficient tension to obliterate pulsation in the aneurism. Pressure over the aneurism caused easy and complete emptying, but on release of pressure there was a gradual refilling of the sac. From the rate of this reflux, which was still further diminished by tightening the carotid ligature, I believed that it might be possible to open the sac and secure the mouths of the tributary and branching vessels, so as to treat the case by Matas' method. I accordingly pierced the most prominent part of the tumor with the point of the scalpel and cut toward the shoulder for about three quarters of an inch. To my disappointment there was a steady, non pulsating fountain of blood, which spurted vertically for about four inches. The insertion of my finger for purposes of exploration at once checked the hemorrhage. The only opening in the sac which I could detect was a large one, which occupied a position toward the shoulder of the patient and admitted the tip of the finger. There were no coagula. The lining wall of the aneurism was everywhere smooth. There was no indication of a tributary opening toward its cardiac side. Evidence

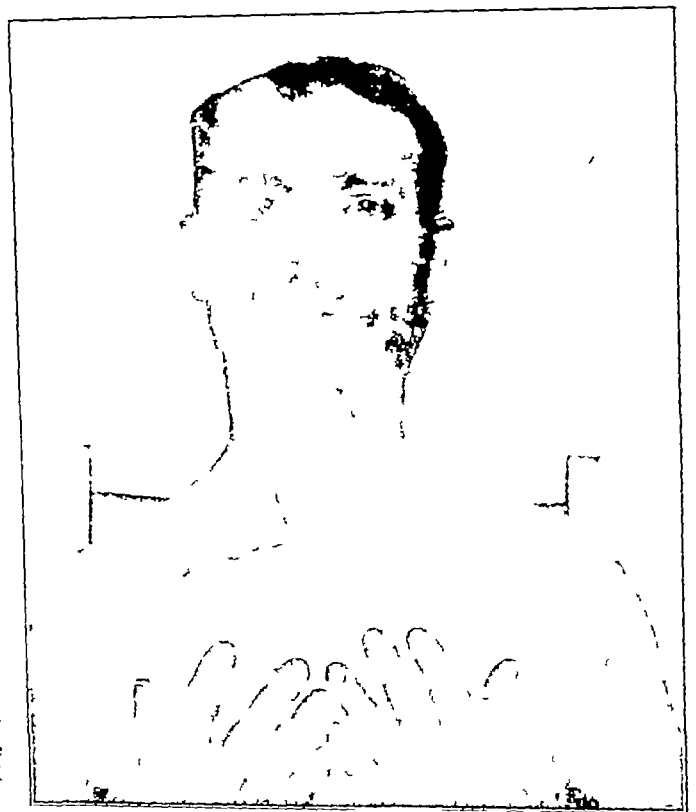


Fig 1—Photograph taken four weeks after operation. Note difference in size of the two hands, the line of the clavicle and the asymmetry due to the transplantation of the right sternocleidomastoid muscle. (This photograph was kindly made for me by Dr. Branower of the House Staff of Mt. Sinai Hospital.)

of irregularity indicating atheromatous degeneration or calcification was wanting. The anatomy of the aneurism, thus shown to be of the sacculated variety, may be understood from the accompanying diagram (Fig 2).

The patient's condition, which had been excellent, now gave some indication of shock, and I determined to risk nothing further, but at once sutured the vascular wound with catgut and a hemostatic needle. The first portion of the subclavian was then ligated with double No. 3 chromicized gut after the method of Ballance and Edmunds. The carotid was also permanently ligated. The divided sternomastoid muscle was attached to the remainder of the clavicle and the wound was sutured with drainage. The usual dry gauze aseptic dressing was applied and the hand and arm were enveloped in cotton and bandages.

Pain following the operation was slight, but for several days there was considerable reaction of absorption and some tender-

ness over the aneurismal tumor. The temperature rose as high as 102° F but gradually subsided and the patient's condition never gave reason for alarm. He was kept in bed for twenty-two days and then was allowed to be about in a wheeling chair. The circulation in the right upper extremity was never poor, but there was naturally some local cyanosis and the radial pulse remained absent up to the time of his discharge, March 22, 1905, when the patient was presented before the New York Surgical Society. The cyanosis had by that time almost disappeared. Pulsation in the temporal artery returned faintly thirty-eight days after the operation.

Postoperative History.—The patient was seen about three months after the operation and the cure of the aneurism seemed to be complete. The tumor had disappeared, except a small, hard mass, and there was no pulsation in the subclavian region nor in the radial. The right hand had remained larger than the left, but was apparently progressing toward the normal. On testing the circulation by pressing and releasing the fingernails it was noted that the subungual blush returned almost, if not quite as promptly as in the left hand. There was still slight disability of the shoulder from the resection of the clavicle, but the bone had in great part reformed.

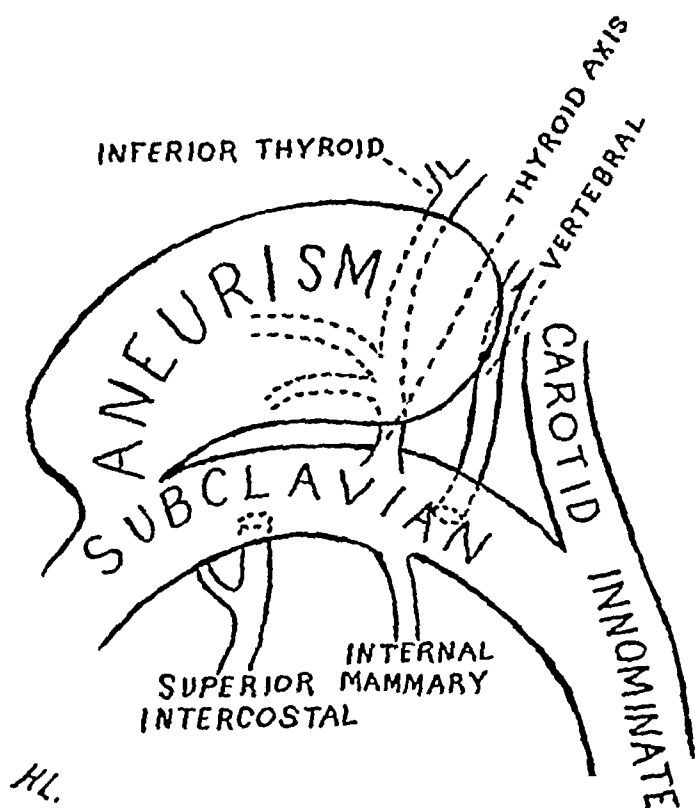


Fig 2.—Diagram of the aneurism

In reviewing this case a few of the more interesting points may be discussed. First, the cause of the trouble. In the total absence of anything pointing to general arterial disease we may perhaps conclude that the most probable causal factor may have been an injury to the healthy vessel by a direct blow, possibly with one of the angles of the rifle stock during military exercise. The aneurism, however, had not the anatomic characteristics of the traumatic variety.

Secondly, we may discuss the modern methods of treating these large aneurisms when they do not occur in an extremity. To be sure, the result here was so excellent that one might be forgiven for following the precedent another time, and yet to leave a large blood clot in a vessel to be taken care of by Nature is not the best surgical practice. Not only is there apt to be serious reaction during absorption, but there is a distinct liability to infection of the clot. The method of Antyllus, which consists in proximal and distal ligation with incision of the aneurism and turning out clots and with final packing of the cavity is one which has always been

considered extremely dangerous. Proximal and distal ligation without opening the aneurism has been practiced and at times with success,² while extirpation (method of Purmann) has been well thought of by many surgeons. These procedures, however, cut off important blood supply and we must not forget the consequent danger of gangrene of the extremity.

If it were possible to deal with these cases after the method of Matas, which would cure the disease by obliterating the aneurism without interfering with the lumen of the vessel, there would be a distinct gain. Thus far, to my knowledge, this operation has been done only when the elastic tourniquet could be employed. My failure was due to the fact that a sufficient number of tributary vessels had not been cut off. Ligation of the thyroid axis, the internal mammary and even the vertebral would not have been difficult nor directly dangerous. A temporary ligature of the axillary would also probably have been required to keep the sac empty enough to permit suture of its orifice (Fig 2). Matas, however, calls attention to the danger of dissecting out the aneurismal sac, since its walls are nourished, not by the contained blood, but by small vessels in the surrounding structures, and necrosis of the sac is apt to follow its clean dissection. Bearing this warning in mind, I did not wish to prejudice the vitality of the sac by a dissection sufficiently free to ligate all the vessels mentioned. Having explored the interior of the aneurism, I was aware that, in addition to what had already been done, possibly a temporary ligature around the axillary alone would control the current, but by this time a considerable quantity of blood had been lost and I felt the need of some haste. Were I called to operate in a similar case, I would certainly control the axillary before incising the aneurism.

I believe that the Matas method would have proved perfectly feasible in this instance, because I am sure that neither the thyroid axis, the internal mammary nor the vertebral was connected with the sac (Fig 2) and that, therefore, a free dissection of the aneurism with the consequent danger of necrosis would not have been necessary. The collateral circulation into the axillary must have supplied the blood which filled the aneurism after the subclavian and carotid had been tied.

Whether or not the incision and digital (rubber glove) exploration of the interior of the sac with its subsequent suture had anything to do with the prompt clotting and the speed of cure is an interesting question.

The entire subject of aneurism of the vessels higher than the axillary is too large to be treated here. The literature of aneurism of the subclavian is rather voluminous. Dr Eben Alexander, Jr, of the house staff of Mt Sinai Hospital, kindly secured for me notes on eighty-nine cases, most of which were operated on before 1890. Many of these aneurisms were of the traumatic variety and the operative procedures were various. The mortality rate in the entire number from all causes was 52.8 per cent. It is, in reality, probably much higher, since failures are unfortunately less likely to be reported than successes. It seems, however, from the figures of Jacobsthal,³ in an article on the operative treatment of subclavian aneurisms, that there has been a distinct lowering of the mortality rate since 1890, probably due to improvement in technic. Thus, before 1890, 55 out of 75 cases succumbed, showing a mortality of 73 per

² Dr J. A. Blake presented a beautiful case of aneurism of the subclavian treated by this method. See report of meeting of New York Surgical Society, Nov. 22, 1905.

³ H. Jacobsthal, *Deut. Zeit. f. Chir.*, vol. lxxviii, p. 230.

cent, while since 1890 only 4 out of 25 cases were fatal, or 16 per cent. This author believes in extirpation as the proper operative procedure and reports 20.8 per cent cures in 24.

Confining this discussion to those operations in which there has been simultaneous ligation of the subclavian or innominate and the common carotid arteries proximal to the aneurism, I have been able to find the reports of 13 or, including my own, 14 cases, with 7 deaths, or 50 per cent mortality. Sheen⁴ has reported 12 of these cases, by various operators, including one of his own, in which there was simultaneous proximal ligation of the innominate and carotid. The thirteenth is an old case by Liston.⁵ One of Sheen's fatal cases, however, was a secondary operation, ligation having been performed for hemorrhage following extirpation of a subclavian aneurism—operator, B. G. A. Moynihan. Omitting this, we have a mortality in 13 cases of 46.1 per cent. The interesting cases collected by Wyeth⁶ illustrating the results of distal ligation for aneurisms near the heart do not concern us here.

The following are my conclusions and suggestions of technic for performing the Matas operation in sacculated aneurism of the subclavian artery.

From an examination of the literature one may readily see that the greatest danger following the ligation of the large arterial trunks is that of hemorrhage, either because of erosion of the vascular walls by the ligation, or on account of infection and ulceration into the lumen of the ligated vessel. Speaking on theoretical grounds, hemorrhage is all but impossible after endoaneurismorrhaphy (Matas). By performing this operation instead of ligation or even extirpation we shall probably greatly improve the statistics. It is simple, and, although best suited to the sacculated forms, may be perfectly feasible in certain cases of the fusiform variety. In a sacculated aneurism of the right subclavian, such as the one here reported, the technic suggested is the following. The incision should be along the anterior border of the sternocleidomastoid muscle from a point about at the level of the cricoid cartilage to the interclavicular notch, thence along the clavicle to its outer fourth. The sternocleidomastoid may then be divided at its insertion and the common carotid artery exposed and followed to its origin in order to find the subclavian. One should remember that anomalies are sometimes found here. Temporary ligatures should now be placed on the carotid and subclavian and the aneurism carefully observed, both as to pulsation and as to the refilling of the sac after it has been emptied by manipulation. If pulsation persists, or if there is a rapid refilling, a temporary ligation of the axillary is necessary. There should be no free dissection of the sac and no exposure of the smaller subclavian branches, such as the vertebral, thyroid axis, internal mammary or superior intercostal. The aneurism may now be opened by an incision small enough to be plugged by the exploring finger and the interior of the sac carefully examined to ascertain the number of large openings.

The character of the hemorrhage must be noted. It will probably not be severe and may be found to proceed from a single orifice of moderate size. There will probably not be pulsation. Endoaneurismorrhaphy may now be performed as described by Matas,¹ and on

its completion the ligatures may be removed, first that of the carotid, second the axillary, and third the subclavian. If everything is in order the wound may be closed without drainage.

In dealing with aneurism of the left subclavian the steps must be changed somewhat to suit the anatomy.

NOTE—Soon after this paper was sent to THE JOURNAL for publication, at a meeting of the Southern Surgical and Gynecological Association, reported in THE JOURNAL A. M. A., Jan. 6, 1906, page 66, Dr. F. W. Parham, New Orleans, stated that he had cured a case of left subclavian aneurism by suture of one orifice within the sac after the failure of proximal ligation.

Special Article

THE PHARMACOPEIA AND THE PHYSICIAN

CHAPTER XIII

ASTRINGENTS—Continued

METALLIC ASTRINGENTS

The insoluble salts of bismuth are admirably adapted for the protection of the intestinal mucosa from irritations of various kinds. While as much as thirty times the average single dose of bismuth salts has been given in the course of a day, by mouth, without any distinct evidence of untoward results, absorption and poisoning have followed the external use of bismuth salts as a dusting powder when used over a large surface.

Owing to the extremely poisonous nature of bismuth when absorbed, the soluble salts seem to us to be entirely superfluous, particularly as their solubility precludes the very object for which bismuth compounds are chiefly used—that is, for the mechanical coating of the surface with a protective layer of insoluble powder. It must be admitted, of course, that even the soluble salts of bismuth are astringent, but we have many safer astringents which are harmless that might well be used in their stead.

The activity of the nostrum makers has resulted in placing on the market a number of preparations that are intended to combine the antiseptic properties of the benzene derivatives with the astringent properties of bismuth, but until we know more of the possibilities and the limitations of internal antiseptics it is preferable to use the simple astringents and to use our antiseptics separately.

Bismuth subnitrate, or subcarbonate, when triturated with water, should form a creamy mixture, and the physician should not permit the use of that which readily separates as a heavy powder, leaving a nearly clear stratum of liquid above it. The covering power of bismuth is in direct proportion to the creaminess of the mixture.¹

BISMUTHI SUBNITRAS—U. S.—An insoluble white powder, without odor or taste.

BISMUTHI SUBCARBONAS—U. S.—Closely resembles the subnitrate.

Average dose (of either salt) 0.5 gm (8 grains).

BISMUTHI SUBSALICYLAS—U. S.—This preparation closely resembles the subnitrate in physical properties and is intended to combine the antiseptic properties of the salicylic acid with the astringency of bismuth salts.

1 A typical prescription for gastric irritation or ulcer is as follows:

R	Bismuthi subnitratis	grs. ʒi	10j
	Mucilaginis acacie	ʒv	ʒi
	Aque cinnamomi q. s.	ʒiij	100j

M. Sig. Shake well and take one or two teaspoonfuls three or four times a day.

In cases in which marked irritability persists, the addition of 0.01 gm (1/6 grain) of cocaine hydrochlorid to each dose as a local anesthetic, may be advantageous, but we do not advise it as a routine procedure. For diarrhea one or two drops of the deodorized tincture of opium may be included for each dose or, if preferred, 1 c.c. (15 minims) of paregoric, the official camphorated tincture of opium. For this purpose it is usually preferable to give one dose every hour for three or four doses then every two to four hours as needed. Bismuth subcarbonate may be used instead of the subnitrate and tincture of kino, tincture of krameria or the compound tincture of gambir (catechu) may be added in the treatment of diarrhea.

⁴ Wm. Sheen. *Annals of Surg.* July 1905 p. 1 also November 1905 p. 802.

⁵ Quoted by Wyeth in "Essays in Surgical Anatomy and Surgery" Wm. Wood, 1879.

⁶ Wyeth J. A. "Text Book on Surgery." Appleton 1888.

Average dose 0.25 gm (1 grain)

BISMUTHI SUBSALICATAS—U S—This substance was at one time widely advertised and is even now occasionally prescribed by its proprietary name, dermatol. It occurs as a bright yellow insoluble odorless and tasteless powder, which is mostly used externally as a substitute for iodoform.

Average dose 0.25 gm (1 grain)

Official Lead Salts

Lead is of interest chiefly because of the chronic lead poisoning so often encountered.

The principal internal use of lead is in the form of the pill of the acetate, usually combined with opium in the treatment of diarrhea. It has also been recommended for dysentery, but it is not nearly so useful in that disease. This preparation should not be given for any considerable length of time, lest it give rise to chronic lead poisoning. The solution of lead subacetate is unfit for internal administration, but is of value in painful swellings and local inflammations and burns. The well known mixture of laudanum and lead water has long been popular as an external application, but any mucilaginous liquid could probably be used in place of the tincture of opium without detriment since the astringency of the lead is the main factor, the local application of the opium alkaloids being entirely superfluous because they are not absorbed from the unbroken skin. The local use of lead water itself is so thoroughly well established that it scarcely requires further comment.

PLUMBI ACETATIS—U S—Acetate of lead, or sugar of lead, is said to have been known to Geber. It was described by Raymond Lully in the thirteenth century, but was not used in medicine until introduced by Goulard a little more than a century ago. It occurs in crystals or as a heavy white powder, having an acetous odor and a sweetish, astringent, afterward metallic taste.

Average dose 0.05 gm (1 grain)

LIQUOR PLUMBI SUBACETATIS—U S—An aqueous solution containing not less than 25 per cent of lead subacetate.

LIQUOR PLUMBI SUBACETATIS DIUTUS—U S—This contains about 1 per cent of lead subacetate and is made by mixing 4 parts of the solution of lead subacetate with 96 parts of distilled water.

The Local Treatment of Mucous Membranes

The local treatment of inflammation of the mucous membranes in the mouth, nose, throat, vagina and urethra, after thorough cleansing, preferably with a solution of hydrogen dioxide, may require mild astringents of either organic or inorganic substances, though, as previously stated, the use of the solution of hydrogen dioxide has greatly lessened this necessity. Alum has long enjoyed a particular reputation in the treatment of stomatitis, and has also been used as a gargle, but it is injurious to the teeth, and the necessary solution, made of 1 part of alum in 20 parts of water, is preferably applied directly to the affected parts by means of a camel's hair pencil or a swab made of absorbent cotton. After gargling, the mouth should be rinsed with water. Alum is not given internally so often as it was formerly, it is irritating and possesses no advantages over other astringents. Because of this irritant action it is emetic, and, while not very dependable, may serve in an emergency if no surer emetic is at hand. Small ulcerations of the throat, after having been cleansed with an antiseptic solution, may be touched with a mixture of 1 part of ferric subsulphate and 2 parts of glycerin with a camel's hair pencil.

A very large number of astringent gargles are in common use, but the following is a good representative of the class.

3 The following mixture will probably answer the purposes for which laudanum and lead water are commonly used.

R	Liq plumbi subacet	gr lxxv	5
	Mucil acac	gr xlv	3
	Aqua, q s ad	℥iii	100

The solution of lead subacetate is diluted with 55 c.c. (16 drams) of water and the mucilage with 27 c.c. (8 drams) the two are then mixed. Fifteen c.c. (4 drams) of alcohol may be added to the water, but the amount of alcohol present in the mixture of laudanum and lead water is too small to be of any benefit.

R	Tinctura ferri chloridi	m℥	10
	Potassii chloratis	℥m	12
	Aque q s	℥vi	200

Those who object to the use of ferric chlorid may find the following preferable.

R	Glyceriti acidi tannici	℥v	20
	Aque q s	℥vi	200

ALUMEN—U S—Alum should contain not less than 99.5 per cent of pure aluminum and potassium sulphate. It occurs as colorless crystals or as a white powder, it is odorless, but has a sweetish and strongly astringent taste. Alum is soluble in 9 parts of water, but is insoluble in alcohol.

Average dose 0.5 gm (8 grains)

ALUMEN LASCICATUM—U S—Popularly known as dried alum, must contain not less than 99 per cent of anhydrous aluminum and potassium sulphate. It is used for the same purposes as alum, and in addition is somewhat caustic when dusted, as a dry powder, on exuberant growths.

The Use of Zinc Salts

Zinc sulphate and zinc phenolsulphonate may be considered together, they have a variety of applications, and it is only necessary to suggest the strength of the solutions that are to be used for various purposes.

For the eye they are generally used in the strength of from one fourth to one half of 1 per cent in a solution of boric acid, to which camphor water may be added.

For the urethra strong solutions should not be used, one half of 1 per cent in water being sufficient. The popular combination of zinc sulphate and lead acetate, resulting in the insoluble lead sulphate and the very astringent zinc acetate, may possess some advantages over the more simple solution, but they are not very apparent.

Vaginal douches may be somewhat stronger and are frequently prescribed of from 1 to 2 per cent strength.

As noted before, all the astringents may act as emetics if they are sufficiently irritant to the mucous membrane of the stomach and are not caustic. Zinc sulphate, however, deserves the preference among the astringents used as emetics. For this purpose it is usually given in doses of 1 or 2 gm (15 to 30 grains) dissolved in a teacup of warm water.

The official salts of zinc that are of interest as astringents are:

ZINCI SULPHAS—U S—Colorless crystals, without odor, having an astringent metallic taste. Zinc sulphate is soluble in less than 1 part of water, but is insoluble in alcohol.

Average dose Emetic, 1 gm (15 grains)

ZINCI PHENOLSULPHONATE—U S—The zinc sulphocarbonate of previous editions of the Pharmacopeia has been referred to under antiseptics.

Average dose 0.12 gm (2 grains)

ZINCI ACETAS—U S—This constitutes a widely used and deservedly popular astringent.

Average dose 0.12 gm (2 grains)

ZINCI OXIDUM—U S—A white or yellowish white powder, insoluble in either water or alcohol, it is largely used as a local application in dusting powders and in ointments, but is seldom given internally.

Average dose 0.25 gm (4 grains)

Copper and Iron Salts

CUPRI SULPHAS—U S—Blue stone or blue vitriol was known to the Greeks as Chalkanthos. Dioscorides described it as being a valuable astringent and, in large doses, emetic. It occurs as deep blue crystals that are devoid of odor, but have a nauseous, metallic taste. It is soluble in about 3 parts of water.

Average dose as an astringent 0.01 gm (10 mg or 1/5 grain), as an emetic, 0.25 gm (4 grains).

Of the numerous preparations of iron that have astringent properties we will mention but one, the chlorid, as representative of the whole class. This is official in several forms.

FERRI CHLORIDUM—U S—This occurs in orange yellow crystalline pieces, nearly odorless, but having a strongly styptic taste.

Average dose 0.05 gm (1 grain)

LIQUOR FERRI CHLORIDI—U S—An aqueous solution of ferric chlorid, containing about 20 per cent of the anhydrous salt

Average dose 0.1 c.c. (1½ minims)

This preparation is but little used, except for preparing

TINCTURA FERRI CHLORIDI—U S—This is made by adding 35 parts of solution of ferric chlorid to enough alcohol to make 100 c.c. The official tincture is directed to be prepared at least three months before being used

Average dose 0.5 c.c. (8 minims)

This preparation is injurious to the teeth, therefore it should be directed to be taken through a tube and the mouth rinsed with water or a very mild solution of an alkali, like limewater

Use of Silver Nitrate

Silver nitrate in the form of the sticks, lunar caustic, is mainly used as a caustic for touching warts of various kinds and for non granulating wounds. A solution of silver nitrate is sometimes used as an application to the conjunctiva, followed at once by a solution of sodium chlorid, whereby a momentary action of the silver nitrate is obtained, the nitrate being instantly converted into the chlorid when the solution of sodium chlorid is applied

Silver in combination with different proteids has been introduced under a variety of trade marked or proprietary names and recommended as a non irritant antiseptic, mainly for the treatment of gonorrhea. Credé some years ago introduced a soluble form of metallic silver, for which certain manufacturers make the fabulous claim that it is an efficient disinfectant of blood and tissue. So long as septic diseases resist all treatment, it seems strange that reputable manufacturers will make such obvious misstatements

The only official preparation of silver that is of direct interest in connection with astringents is

ARGENTI NITRAS—U S—This salt is supposed to have been known to Geber, but was introduced into medicine by Angelus Sala during the seventeenth century. It is very soluble in water and occurs as colorless, transparent, tabular crystals, that darken on exposure to light in the presence of organic matter. It is odorless, but has a bitter, caustic and strongly metallic taste

Average dose 0.01 gm. (10 mg., 1/5 grain)

The internal use of silver nitrate as an astringent is necessarily empirical, as the actual composition that is formed when silver nitrate is brought in contact with organic matter must be complex and problematic. A favorite pill of the late Dr. William Pepper for chronic gastritis was the following. It is given without comment

R	Argenti nitratis		02
	Extracti hyoscyami		
	Mannæ, aa		
To make one pill		gr 1/3	

This was directed to be given three or four times a day, and the composition was occasionally varied by substituting powdered opium for the extract of hyoscyamus

Vasoconstrictors

In addition to the astringent drugs depending on tannin or the metallic salts, certain alkaloids possess a markedly astringent, or, more properly, vasoconstrictor effect when applied to mucous membranes. Of these, the most useful are hydrastin, a derivative of hydrastin, from which it is obtained by oxidation, and the alkaloid of the suprarenal gland. Here we are compelled to admit that this latter alkaloid, which is now being marketed at the modest price of some \$800 per ounce, despite Abel's simple and inexpensive method of preparation, is superior to the official desiccated suprarenal gland. The application of a 1 to 1,000 solution of hydrastin or a 1 to 5,000 solution of the suprarenal alkaloid, in 0.9 per cent solution of sodium chlorid, to an inflamed conjunctiva or inflamed nasal mucous membrane often affords prompt relief. In view of the very great difference in cost without a corresponding difference in effect, the physician can well afford to use hydrastin in preference to the more expensive alkaloid in such conditions

The desiccated suprarenal gland may be macerated in water and the fluid filtered and used but any of the preparations of

the alkaloid which appear under a variety of trade names will usually be preferred. Slight hemorrhages are also stopped by either of these means

When the flow of blood is copious and hot water is ineffective, styptics are useful, they are not alone astringent, but also cause a sudden coagulation of the blood, and this plugs up the orifice. Large clots must be removed, as they prevent the immediate contact of the astringent or styptic and may conceal a hemorrhage occurring in cavities—the uterus, for instance—in which case the clot may fill the upper part of the vagina

It is necessary to bear in mind the difference between the action of vasoconstrictors, like the alkaloid of the suprarenal gland, and the action of styptics, like tannin or the ferric salts. With the former the action is transitory and the hemorrhage may recur as soon as the action of the drug has worn away, while styptics, when effective, form a plug in the normally extended blood vessel

GLANDULÆ SUPRARENALÆ SICCÆ—U S—Desiccated suprarenal glands are directed to be obtained from the sheep or ox, freed from fat, cleaned, dried and powdered. One part of desiccated suprarenal gland represents approximately 6 parts of fresh glands free from fat

Average dose 0.25 gm. (4 grains)

The alkaloid contained in the suprarenal glands has been variously designated as epinephrin by Abel, suprarenin by Fürth and adrenalin by Takamine. The trade names that are now applied to the solutions of the same substance are legion, and it seems very unfortunate indeed that the committee on revision of the Pharmacopeia did not recognize the alkaloidal substance in an official way and give it an official title. The only effect to be expected from the internal administration of the gland or its alkaloid is the local constriction that is noticed when it is applied to the mucous membrane. The solution of the alkaloid is useful only for intramuscular or intravenous injection. When injected just beneath the skin it produces practically no effect, except a local vasoconstriction

(To be continued)

Clinical Notes

A CASE OF PRIMARY ARTERIAL THROMBOSIS OF THE EXTERNAL ILIAC ARTERY, WITH SECONDARY EMBOLUS*

M. THORNER, M.D.
INDIANAPOLIS

Primary or autochthonous arterial thrombosis of the large vessels, other than the aorta with sequelæ, affords a sufficient incentive to a most careful analysis of each case from a clinic as well as from a histologic standpoint, as the gravity of the subsequent conditions is of paramount importance

The occurrence of secondary emboli from thrombosis in arteries other than the aorta and pulmonary arteries gives the following case an especial significance. To Virchow is given the credit of first actually proving anatomically and clinically, as well as of having first recognized that not all intravascular and antemortem clots are formed at the place where they are found but are the result of emboli. It is a well-known fact that embolus with secondary thrombosis plays a greater rôle in arterial occlusion than primary thrombi, yet the close relation of the latter to the former, as in this case, accentuates the necessity of such careful analysis in order to establish the dependence of the one on the other

The pathologic findings in the following case place it in the category of primary arterial thromboses, and I

* Read before the Marion County Medical Society Indianapolis Ind

have given *seriatim* the phases of the case from the point of clinical interest, and have endeavored to analyze them with reference to their influence in the production of the thrombus.

Patient—Mrs. X, a patient of Dr. H. O. Pantzer,¹ was first seen March 10, 1905. She was a rather small woman, anemic (skin of a greenish hue), poorly nourished, 37 years old, though much older in appearance, and showed the lines of much suffering and wasting. Her only complaint now is that of repeated attacks during many years of colicky pains in the gall bladder region, and lately she becomes jaundiced during the attacks.

Physical Examination—The heart was not enlarged, its action was regular and sounds were normal. The radial artery was soft and easily compressible, temporals could be seen, but were faintly outlined and soft. The lungs were negative. In the abdomen, in the region of the gall bladder, a pear-shaped tender mass projected below the free border of the ribs. The liver dimensions otherwise were normal.

Operation and Result—April 1, under chloroform, cholecystectomy was done, and many gallstones were removed. Convalescence was uneventful until April 9, when the patient had an attack of severe abdominal cramps in the epigastric and hypogastric regions and to the left of median line, accompanied by repeated vomiting. An enema was given, and this was followed by a discharge of a large amount of disintegrated blood and some fecal matter. Nothing was found in vagina or rectum to account for the bloody discharge. Twelve hours later there was a similar discharge of gases, fecal matter and blood. Pain gradually localized itself in the abdomen just below and to the left of umbilicus, where an indefinite tumefaction could be made out, with marked tenderness over same. Castor oil was given and free evacuation of bowels followed, the stools were normal. Pulse was 120, temperature, 101.4.

Further Course of Disease—There was general and local improvement. Pulse and temperature were nearly normal. Early in the morning the patient complained of sharp pain and numbness in the left ankle and foot extending to knee, but after a few hours this entirely disappeared, and nothing unusual was observed in the foot. Twenty-four hours later the patient experienced a sudden, excruciating pain in the left foot extending to the knee. When seen six hours later the foot was pale, cold, and extremely tender to slightest touch. The veins were apparently empty in this extremity, there was no pulsation in the anterior tibial artery and but very slight pulsation in the left popliteal. The left femoral pulsated, but the tension was much less than in the right. By evening, areas of purple appeared over the distribution of dorsalis pedis artery. Physical examination of the heart revealed normal sounds, no displacement, there was no enlargement and the action was regular and forcible.

April 22. The patient's general condition was retrograding, and in her poor state amputation of the limb promised little. She was removed by her relatives to her home out of the city.

May 3. The patient was visited in her home. Her general condition was better than when seen last. The tongue was dry and coated, the skin and sclera were yellowish. Temperature ranged between 99 and 102 in morning and went to 103 in afternoon. Since arriving home the affected limb has been immersed in moist and dry hot applications. The gangrene had continued to spread, and the entire foot and leg were dry and black. An indefinite mass could still be made out on deep palpation of the left side of the abdomen, it was slightly tender. No bruit could be heard over this on auscultation. Bile still discharged from the now fistulous wound. No pulsation could be felt in the popliteal or femoral arteries. Over the latter's course a hard, thick cord could be made out.

Amputation and Result—It was decided to amputate the limb, and this I did, with the kind assistance of Dr. Pantzer and the physician in daily attendance. Amputation was done at the beginning of the middle third. On cutting through the femoral vessels, a mixed thrombus was found to occupy the

artery and a red thrombus the vein. There was some bleeding from the arteries in the anterior part of the limb, but active spurring from those in the posterior part on removal of the constrictor. The deeper circulation was evidently maintained by the crucial anastomosis. The skin circulation was not so good anteriorly as posteriorly. There was bleeding from the nutrient artery of the femur. The flaps were united, drainage inserted to inner angle, and wound dressed. The patient recovered without shock.

May 26. Margins of stump after the first week began to show malnutrition, and shortly thereafter necrosis of the flaps occurred, with separation of the same. The general condition gradually retrogressed. Temperature ranged between 99 and 101, and pulse from 90 to 130. A marked marasmic state supervened, and the patient died.

Autopsy—After much persuasion, an incomplete autopsy was granted by the relatives, the result of which follows.

The brachial artery in the left arm had been injected with a formalin solution. There was pronounced rigor mortis. The stump of the amputated limb was powdered with some drying material. The flaps showed marginal necrosis, the bone stump was dry. A small amount of clear fluid was in the pericardium. The heart was of normal size, the valves were glistening and white, and there was no evidence of endocarditis. The ventricles and right auricle contained a small amount of blood, no thrombi or ulcerations were found on the valves or on any part of the endocardium. The first part of the aorta was examined, the valves of this, as well as of the pulmonary artery, and the vessel walls showed no changes.

Abdomen. There was a very slight amount of clear fluid in the peritoneal cavity. The omentum was found intimately adherent to the anterior and lateral abdominal walls in the left iliac region and to a coil of small intestines, which it almost completely hooded in. This coil of small intestines, about eight inches in length, was situated below and to the left of the umbilicus. It was acutely kinked on itself, much distended, the contiguous margins of the kink closely adherent, and the whole coil adherent by not marked adhesions to the lateral and posterior abdominal walls. At points near the beginning of the upper limb of the kink and near the end of the lower limb were two apposed necrotic areas, the size of a 10 cent piece, and opposite the mesenteric attachment, which had involved nearly the whole thickness of the intestinal walls. Coincidentally, this entire mass was directly over the left common iliac artery.

Stomach. This viscus was contracted and small, and presented no evidence of inflammatory thickening or tumor.

Liver. This organ was small, anemic, and on section apparently the seat of fatty changes.

Spleen and Pancreas. This was somewhat enlarged and hard, and the pulp was deeply congested.

The pancreas was not enlarged, but was anemic. On section nothing abnormal was noted. The splenic vein was not thrombosed, and the retroperitoneal glands not enlarged.

Left kidney. The capsule was somewhat thickened and in places adherent. On section the tissue was pale, the striæ were well shown.

Arteries. The left common iliac artery contained a thrombus up to about three quarters of an inch above its bifurcation into the internal and external iliacs. The left common iliac and external iliac were dissected out and removed for examination to a point about an inch above Poupart's ligament. The femoral artery and vein were also dissected out and removed to one inch below Poupart's ligament. The popliteal artery and vein were dissected out and removed from the amputated limb, which until now had been kept in a strong formalin solution. The dorsalis pedis artery, with the tissue around, was in part excised, its lumen was not obstructed and contained but a thin clot.

Histopathology—The kidney showed marked parenchymatous degeneration, affecting chiefly the convoluted tubules. The glomeruli, for the most part, were considerably contracted, there was congestion of the cortical blood vessels, but no interstitial deposits. The whole aspect was that of a parenchymatous degeneration of considerable degree. The arteries of the kidney show no arteriosclerosis whatever. The

¹ This case occurred in the service of Dr. H. O. Pantzer of Indianapolis, to whom I am indebted for the privilege of reporting it.

liver showed moderate fatty degeneration, without special reference either to the central or peripheral parts of the lobule. The pancreas was negative.

Section of arteries. Commencing about one-half of an inch from the upper end of the common iliac section (really the lower half inch of the artery), the intima was very much thickened (due to proliferation of the subendothelial layer) and projected into the lumen for about $1/5$ the diameter of the vessel. This was a node in form, as a very short distance below and above this the intima was but slightly thickened. The media showed a granular degeneration opposite the intimal thickening and was thinned out here. The adventitia showed no thickening or infiltration. The vasa vasorum showed no changes. The contained thrombus was, for the most part, of the mixed type, varying with red. Examining the thrombus from above downward, the first evidence of organization was seen at the beginning of the external iliac artery. This organization sprang from the intima on the same side as the intimal node above, and consisted of a stroma of fairly old connective tissue, and projected into the lumen of the vessel for about one-third its diameter. This was the only point in all the sections of the arteries where there was organization, and this was most probably the oldest part of the thrombus. The intima in the different sections was very slightly thickened throughout. The media nowhere else, except in the part mentioned, showed any degenerative changes or round celled infiltration. The vasa vasorum showed no obliterative endarteritis in any part of the sections. The internal iliac (a small section examined), besides containing a mixed thrombus, showed no structural changes. The popliteal and femoral veins, in the sections examined, contained a red thrombus for the most part, some of the sections, however, showed mixed thrombi. That part of the femoral vein just below Poupart's ligament showed beginning organization, this was the only point in the veins where organization was found. Bacterial staining was made only of the thrombus contained in the popliteal artery, but no bacteria were found. This was the only part of the thrombus examined for bacteria, first to establish the presence or absence of a bacterial embolus, and, second to determine if that part of the thrombosed vessel above the amputation, exposed to contamination as it was, would offer no proof as to whether or not the primary thrombus contained bacteria.

Remarks.—The study of the physical signs and the histopathology in this case—the soft radials and temporals, and the absence of degenerative or other changes in the walls of the other large vessels examined—would point to the primary changes found in the common iliac as a local process.

DISCUSSION OF THIS CONDITION

In determining the etiologic factors in the production of this localized arteriosclerosis, there were conditions which do not harmonize with the usual course in the arteries after syphilis or senility—there were no caseation or calcification, no cellular infiltration, nor were the vasa vasorum opposite the intimal thickening (or at any other point) in any but a normal condition. The change seemed to have been primarily in the media, in the form of a granular degeneration, the media was thinned out at this point and compensatory hypertrophy of the intima followed. There was entire absence of specific history or symptoms of alcohol or gouty manifestations, yet, in the presence of a parenchymatous degeneration in the kidney and fatty changes in the liver, there must have been some other toxic influence present, probably from the gangrenous intestine, and the intestinal disturbance following.

It is evident, also, from the microscopic findings in the artery, that the thrombus formation began not at the point of greatest intimal thickening, but at a point about half an inch below. This being the oldest part of the thrombus, it was from here, most probably, that the embolus was cast off and from this a secondary ascend-

ing thrombus resulted. From the sequence of events the embolus most probably lodged in the anterior tibial artery.

The compression of the common iliac by the mass of intestines bound down above it lent its influence in affecting the blood current at this point, and the formation of slight eddies beyond the projection of the intima would seem a most natural site for thrombus formation, and at this point, indeed, was found the oldest part of the thrombus.

We have here, therefore, the cardinal factors in thrombus formation, namely disturbance in circulation, local lesion in the vessel wall, changes in the chemistry of the blood—a marasmic state which may have been primary or secondary to the toxemia from the intestines.

The diagnosis of the embolus in this instance was typical of such a state. The first embolic impact, though marked, was not intense. Then followed a subsidence of the symptoms after a few hours, and twenty-four hours later there followed what I believe to have been a second embolus, when the symptoms were sudden and very intense.

The occurrence of a "reflex chill" at the time of embolic impact was absent in this case. Dr W H Welch states that chills associated in such cases are due usually to infection rather than to vascular plugging.

The temperature about the time of the embolism was $99+$, rising to $100+$ (rectum) in the evening. The patient had a slight elevation of temperature before this attack, and the amount of temperature due to the embolism or thrombosis can not be stated. Dr Welch states that, independently of the intervention of pathogenic micro-organisms, arterial embolism may be accompanied by temperature. Gangolphe and Courmont attribute the fever sometimes observed after arterial occlusion to the absorption of pyretogenetic substances which they find in tissues undergoing necrobiosis.

The prognosis in cases such as this one must necessarily be grave. I can not see how any assistance can be rendered in saving the limb or even the life in a case like the one I report, unless cicatrization and healing first take place in the original site of the thrombus, from which point secondary emboli may continually be displaced, and from which, in turn, other thrombi are formed, even if the primary thrombus itself does not become an occluding thrombus.

TREATMENT

From the pathologic findings in this case it would seem that, barring the infectious emboli, conservatism, namely, awaiting definite developments in the part, is the safest manner of handling such cases. At first palliative measures should be used for the encouragement of collateral circulation, provided, of course, that from the anatomic conditions this can be accomplished, and if the process is not rapid. Routine treatment in general consists of elevating slightly the affected limb and enveloping it in warm compresses or solutions. In the palliative treatment I would suggest, further, that the affected limb should be treated most aseptically. The limb should be shaved and the part thoroughly cleansed and kept continuously under the influence of mild antiseptics, preferably dry, so that in case of local gangrene the danger of sepsis is largely avoided and more time allowed for the recovery of the part or for a line of demarcation to form. Beginning with the onset of the embolism or other evidence of thrombosis it would seem

that the iodine preparations should be given to aid in the absorption of the new-formed tissue, as well as to treat a possible specific basis for the arteriosclerosis. If the resulting gangrene is so extensive that amputation is necessary, this, of course, must be done, but well up in healthy tissue where this is possible.

224 North Meridian Street

RETENTION OF URINE CAUSED BY ENLARGED PROSTATE AND RELIEVED BY PROSTATECTOMY *

GEORGE W. KING, M.D.
MILWAUKEE, WIS.

Patient's History—Twelve years ago the patient had an attack of retention while out prospecting and had to travel a distance of fifty miles to reach medical aid. He was easily relieved by the use of a catheter and instructed in the care and use of the instrument. By its aid he was enabled to go on with comparative comfort until a recent date.

For many years he has resided alone in a cabin situated near an infrequently traveled road, and when the present attack of retention came on there was no available way of securing assistance. He had been a sailor at one period of his career and having a flag in his possession he naturally conceived the idea of floating it at half mast as a distress signal. After some days, fortunately, it attracted the attention of a passerby who went into the cabin, and, discovering his condition, took him to the nearest physician where an attempt to pass a catheter was made without success.



View of the prostate removed, weight, 5½ ounces

Hospital History—He was immediately sent to the hospital and came under my care. He had a history of five days' retention and there were already symptoms of uremia. Obviously the first thing to do was to relieve the retention by the usual method if possible. The prostatic obstruction was found to be so great that no form of soft catheter could be passed. A metallic instrument with long curve was made to enter the bladder without serious difficulty and a considerable quantity of bloody urine evacuated. The amount taken away did not exceed one third of the contents of the bladder. This was amply sufficient to afford temporary relief, which was the most urgent indication at that time. By this plan too sudden reduction

of pressure on the bladder, ureters and kidneys was avoided and time was gained for further investigation. The introduction of the instrument caused so much pain it was used but twice in the twenty-four hours instead of at shorter intervals. This treatment was continued during the three days preceding the operation. The obstruction being seated so high up in the pelvis, it was a debatable question which route to choose. The peroneal was finally decided to be the safer in this instance and was therefore given the preference.

Operation—The operation was begun with the expectation that it would be difficult and so it proved to be. The growth could not be brought down by the sound or by any of the tractors designed for the purpose, hence the work had to be done almost entirely by the fingers, guided by the sense of touch, to define the boundaries of the diseased tissue. By patience and perseverance the mass, as seen in the accompanying illustration, was removed and free drainage established. The patient withstood the operation remarkably well for one of his years, there was no shock, and no elevation of temperature after the reactionary stage had passed. He was allowed to get up when he pleased. In fact, he did get out of bed on the day following the operation, but of course did not move about much for a day or two.

His convalescence has been exceptionally rapid, a small amount of urine came through the natural passage on the sixth day, which is not the rule. With a complete healing of the wound I believe his troubles will be over.

ICE-BAGS AND WHEN TO USE THEM

P. A. AURNES, M.D.
MINNEAPOLIS, MINN.

The reluctance with which the laity used to submit to the application of ice-bags or to the use of cold water in disease is fast disappearing. Wholesome and general awakening to the full appreciation of the great remedial power possessed in the scientific application of simple means like water and its different forms, vapor or ice (hydrotherapy, thermotherapy or frigerotherapy) instead of relying on antipyretic and analgesic drugs, when fighting systemic or localized inflammations, is evidence that the teaching of men like Esmarch, Winternitz, Schlikoff and others is gaining ground.

There is, however, still field for educational work, not alone among the laity, but also among physicians, as there are many who still keep on "crossing the river in going after water," as the saying is.

Many medical men know the value of cold applications as well as the danger of antipyretic and analgesic drugs, yet they lack the moral courage to carry them into practice from fear of being discharged by an ignorant patient for applying anything so "dangerously" cold as an ice-bag. Furthermore, some men relegate themselves to the rear guard of the profession by condemning at all times the use of hydro-therapeutic measures and cold applications in any form, and prefer to stick to the dirty, antiquated flaxseed poultice or to some proprietary "mud" preparation with its cure-all qualities.

Scientifically considered, heat and cold differ only in degrees, but let it be understood that, although the physiologic effect during their application within certain limits may be identical, there is a distinct difference in the results obtained, when they are applied to parts, where a pathologic process is in evidence.

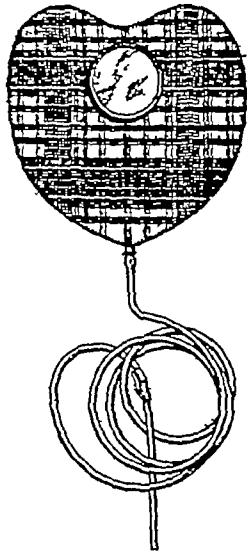
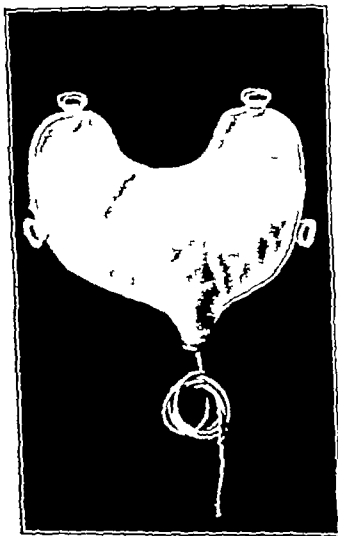
Thus a warm poultice application tends to relieve pain, but it also tends to favor the formation of bacterial growth—the formation of pus—when pyogenic germs happen to be the cause of the inflammation. On the other hand, if an ice-bag be applied to such a region it will not alone relieve congestion and pain and that

* Presented at a meeting of the Lewis and Clark County Medical Society.

more effectually than any bearable hot application ever can do, but, what is usually of greater importance, it tends to prevent the formation of pus, it will cool the region involved to such an extent, even if the trouble be deep-seated, as proven by Winternitz, Esmarch and others, that the growth of bacteria is retarded, if not entirely checked.

This relation of bacterial invasion and growth to the majority of acute inflammations is an established fact, and it is further true that such growth is retarded or entirely checked, and that the cardinal symptoms of inflammation, redness, heat, pain and swelling are effectually relieved and even the fever of a systemic infection materially reduced by the proper application of ice-bags. It is the opposite of good treatment to apply warm applications to acutely-inflamed regions, especially when pus-producing germs are suspected to be at work, unless the purpose be to aid in the production of pus, which seldom is the case and never should be, if treatment is started early.

Heat, particularly moist heat, has its place and is of considerable utility when it is a question of aiding Nature to remove inflammatory products and when the acute process is at an end, as for instance, after crisis



in lobar pneumonia or for the elimination of serous exudates. Cold, on the other hand, is indicated in the majority of acute ailments, but it should be remembered that the selection of the form of cold to apply is of the greatest importance in the physiologic effect produced. A cloth wrung out of cold water and applied to an inflamed area produces at first a certain amount of nervous shock, absorbs heat, contracts the blood vessels and thereby lessens congestion. Removing this cloth, wringing it out from cold water and again replacing it creates a distinct irritation or stimulation of the parts, a process of reaction, an increased blood supply and a dermic stimulation that is frequently undesirable, particularly when the inflammation is caused by bacterial invasion. In all such cases the object should be to apply a form of cold in which the cooling agent is of constant and lasting degree and in which the degree of cold is one that will help to retard or to check bacterial growth, to relieve congestion and pain and at the same time do no injury to the vitality of the parts covered. Uniform currents of cold water, cold air, the use of liquid air, freezing mixtures, etc., have all been tried but no form of cold is more simple and better suited for the purpose than melting ice when properly applied.

In order to apply melting ice properly the ice-bag should be one that is provided with a drainage tube, so that the water from the melted ice is constantly drained off, and in which the degree of cold used is constant, thereby utilizing the enormous amount of heat required to liquefy ice, the difference between melting ice and ice-cold water as a heat-absorbing agent being as 80 to 1, measured by calorimeter in centigrade degrees. The importance of drainage in ice-bags, therefore, is evident. Without such provision ice-bags, soon after their application, become more or less filled with water and air, forming a rolling body hard to keep in place, which gives only the effect of cold water—so greatly inferior to that of melting ice. A drain ice-bag filled with crushed ice to such an extent only that its weight can cause no obstruction to the circulation of the parts to be covered is the ideal form of ice application. Such an ice-bag, when water and air are pressed out at the time of applying it, remains collapsed and holds the ice between the walls of the bag by the outer pressure of the air and, furthermore, retains any shape given it till the ice is melted. Thus it can readily be made to fit the head, neck, chest, abdomen or a joint.

Of diseases in which the application of ice-bags is of great importance as an auxiliary remedy the following may be mentioned. Acute meningitis, acute mastoid disease, acute tonsillitis, lobar pneumonia (with marked success), acute pleurisy, acute endocarditis and myocarditis, acute hepatitis, acute gastritis, acute rheumatic arthritis and acute synovitis, acute enterocolitis, acute peritonitis and acute pelvic diseases, acute cystitis, acute appendicitis (of great benefit), hemoptysis, hematuria, typhoid fever (to head and abdomen), scarlet fever (to head), erysipelas (to region involved), neuralgia, headache, etc.

My drain ice-bag and specially designed pneumonia bag now in use at many hospitals are shown in the accompanying illustrations.

SCHISTOSOMA HÆMATOBIUM IN THE CANAL ZONE

N. EARLE HIGGINS, M.D.
ANCON, PANAMA

The following cases of infection, with the blood fluke, *Schistosoma hæmatobium* (bilharzia), occurring in routine stool examinations, would indicate that this parasite is not an uncommon one in the Canal Zone, particularly among the negro laborers from Martinique.

CASE 1—Martinique negro, male. On Isthmus one month (Culebra). Admitted Dec. 2, 1905, with lobar pneumonia.

Stool. Ova of bilharzia and uncinaria.

Blood. On admission this was negative for malaria, nine days after crisis leucocytes were 9,500, hemoglobin, 40 per cent.

Urine. During the height of fever there was a slight trace of albumin, with a few hyaline and granular casts. Albumin and casts disappeared before discharge. Sedimented specimens showed no blood or ova.

There were no bladder symptoms.

CASE 2—Martinique negro, male. On Isthmus one and one-half months (Panama). Admitted Dec. 10, 1905, with malaria and bronchitis.

Stool. Ova of bilharzia and uncinaria, *Tricomonas intestinalis*.

Urine. Negative, sedimented specimens.

No bladder symptoms.

Blood. Ameboid rings, estivo autumnal parasites, leucocytes, 4,200, hemoglobin, 35 per cent.

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SATURDAY, MARCH 21, 1906

MEDICAL AND LIBERAL EDUCATION

All who have been striving to promote solid progress in the American medical profession have taken great interest in the recent efforts to make possible the combination of liberal education, as represented by a preliminary college degree in arts and science, and the exacting requirements of present day medical education. From the comparative low standard of fifty or more years ago, the requirements for admission to college and for obtaining the degree have been gradually and steadily increased until the average age for graduation has been increased two, three or even more years. The graduate of fifty years ago was no more advanced than the present sophomore and besides this the requirement for admission to college was much less exacting. Moreover, at least two additional years have been added to the time required for medical study and this is not optional, but required by state laws, much to the benefit of the standing of the medical profession. As a result of these increased requirements it is seldom possible for a man to get the liberal education represented by a college degree and to take the four years required in medicine before twenty-seven or twenty-eight years of age, and the man does not reach his period of useful activity until he is nearly thirty years old. The increase in time is so great that many men at present do not even try for a liberal education.

That this postponement of a man's practical usefulness should be cut down to two or three years and still leave him the advantage of liberal culture at college is generally admitted. To accomplish this various plans have been suggested. Chicago, Cornell, Michigan, Columbia and a number of other institutions have arranged a combination of courses by which the student may take a degree both in science or arts and in medicine in one or two years less time than the eight years regularly required for both degrees taken separately. Among the institutions not having a medical department, Wabash College allows its students to enter an approved medical college after three years of study and grants the degree in arts at the end of the first year of professional instruction. The cutting down of the required college course from four to three years for all students has been urged on several sides of late. This would not be so great an innovation, however, for Johns Hopkins Uni-

versity has required of its art students only three years of study, and with a liberal range of electives from the start, and for years Yale has maintained a three years' course in its scientific school. At Harvard the present system gives an opportunity to take the degree in three years, and about 15 per cent of the student body avail themselves of this. We are told that the change has not lowered the standard nor lessened the distinction of the degree.

The discussion of a three years' course as the normal for the degree in arts has recently been taken up at the meeting of the Associated Harvard Clubs and a sixty page report prepared, giving the opinion of the graduate body on the practical side of the question and the actual bearing of period of residence on after life in the professions and in business, specially in the West. The counting of the first year of professional study as the fourth year in college is thought objectionable because it forces the student to discriminate in favor of the professional school connected with the university in which he takes his arts degree, for they consider it desirable that he should choose independently. An abstract of the report, published in the *Harvard Graduates' Magazine*, 1905, vol. xiv, p. 95, will be of interest to all who have been following these questions. There has undoubtedly been a falling off in the proportion of the college educated men taking up the study of medicine and by cutting down the liberal course of study the number would no doubt be somewhat increased again. European experience, where secondary schools are highly organized and well conducted and professional education amply developed, all indicates that four years of liberal study can not be maintained between the school period and the period of professional study. The standards of the secondary schools should be improved and it would not be difficult to prepare the average student for college at least two years earlier than is usual at present. If this were arranged, with the cutting off of one year from the college course, it would be possible for students to graduate in both arts or science and medicine at twenty-four, instead of two or three years later, as is now usually the case. The shortening of the course of liberal study seems more justified from the reason that the mental discipline of the professional course is more valuable than formerly. The shortened course would also tend to lessen the excess of attention given to athletics and indulgence in other diversions injurious to proper attention to study, without depriving the student of reasonable opportunity to enjoy ideal college life. Three years of undergraduate study is sufficient to give the general culture, which is the object of college education, and three comparatively strenuous years are better altogether than the present four years of lax effort.

Whether the suggestions of the committee of the Associated Harvard Clubs will lead to any change of policy by Harvard University will remain to be seen. But the fact that the report of the committee includes letters

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and interviews from over fifty persons in business and professional life indicates a live interest in the problem by busy men. Those of the medical profession, who have had the advantages of collegiate training, are general advocates of similar liberal studies for others, and, no doubt, whether these changes are introduced or not, a great proportion of the coming leaders of the medical profession, as in the past, will precede their medical studies by a college course. That the efficiency of education need not suffer by an arrangement which would shorten the course two or three years, we feel sure, and any arrangement that would bring about such an end would undoubtedly be welcomed by students.

EXPERIMENTAL EOSINOPHILIA

There are two opinions in regard to the relationship between the various forms of white blood corpuscles, the one maintaining their genetic distinctness, the other that transition is easy from one form to another, and well-known hematologists are arrayed on either side.

On account of the large size and the staining properties of their granules, the eosinophilous leucocytes have served as the basis of more study than other forms. Their increase in the blood in certain diseases has considerable importance in diagnosis, as is well known, in trichinosis for example, eosinophilia is very characteristic, but it may occur in other forms of helminthiasis as well. The behavior of eosinophiles in bacterial infections has long been the subject of investigation, and it has been ascertained that in some infections an increase of eosinophiles indicates a favorable outcome, while diminution in number has the contrary significance. In spite of the many researches these cells have instigated, their origin and their granules still present many problems.

It has been generally taught that the eosinophiles, in common with other leucocytes, are produced in the hematopoietic lymphoid structures, especially the bone marrow, that their appearance in the blood in larger numbers than normal is due to a chemical attraction caused by substances or alterations in the fluids of the blood, and their great excess over other forms of leucocytes in the tissues in certain inflammations and tumors, the so-called localized eosinophilia, has also been explained by chemotaxis.

Now the similarities in appearance and reactions to dyes of the erythrocytes and the granules in the eosinophilous leucocytes have led to suspicions that there might be a genetic connection between the two, indeed it was once supposed that the red cells were derived from these granules. The exact converse of this, the origin of the granules from the red cells, is also an old idea but one which has met with little acceptance because of the prevalent belief in the distinct origin and specific nature of each form of leucocyte and their inability to be transformed one into another.

It is, therefore, of great interest to have rather convincing evidence offered in favor of the assumption that the granules in eosinophilous leucocytes consist of hemoglobin derived from the red corpuscles, in a word, that eosinophiles are essentially phagocytes, and a point of view is presented that may lead to quite radical alterations in our ideas of leucocytes.

Stschastny finds a marked eosinophilia in animals a few days after the intraperitoneal injection of either normal alien serum or alien serum with increased hemolytic properties, the so-called immune serum.¹ The presence of eosinophiles in the peritoneal cavity, in the omental vessels and vessels of other adjacent structures in greatly augmented numbers preceding the development of a generalized eosinophilia led him to trace the origin of the eosinophilia in the phagocytosis of erythrocytes, terminating in eosinophilous leucocytes by unbroken transitions, which followed the injections. Phagocytosis was also present in the bone marrow, and here also the eosinophiles were increased in numbers. These experiments indicate, therefore, that the eosinophilia is an expression of the manner in which the organism disposes of its own red corpuscles.

This explanation of the experimental eosinophilia caused by hemolytic sera may throw some light on the increase of eosinophiles observed, for instance, in hemorrhagic pleuritic exudates, also on the eosinophilia appearing after the acme of numerous infectious fevers and on the repeated occurrence of eosinophilia in the afebrile stages of the malarial fevers. It is noteworthy in this connection that phagocytosis of red corpuscles is a part of the histologic changes in many infections. The study of hemolysis has been, for the most part, the study of the solution of the red blood corpuscles of one species by the blood serum of another, a field apparently quite removed from practical medicine. These observations of Stschastny must be added to the list, already a long one—many examples have been considered in these columns—of instances in which light has been thrown unexpectedly on obscure processes of spontaneous disease by the study of hemolysis.

"SPIROCHÆTA PALLIDA" IN HEREDITARY SYPHILIS

"*Spirochæta pallida*" has been demonstrated in the organs of hereditary syphilitics by a number of observers. Just recently Levaditi publishes an important contribution to this subject,² in which several interesting facts are brought to light. Thanks to an improved staining method (impregnation of small pieces of formalin fixed tissue with silver nitrate, reduction with pyrogallie acid, and counterstaining), Levaditi is able to establish more clearly the relations of the spirochete to the lesions in hereditary syphilis than heretofore possible. He shows that organs and tissues most involved in the syphilitic process contain the largest number of organisms, namely,

¹ Ziegler's Beiträge, 1905 vol xxxviii p 450

² Ann de l'Inst Pasteur 1906 vol xx p 41 See p 917

the liver, the lungs, the adrenals, and the skin, in the order given, thus demonstrating the rôle of the spirochæta to be more important than that of a mere secondary invader

In acute rapidly fatal cases the parasites are more diffusely distributed, in the chronic, tardy cases they are present mostly in the organs affected, e g, the liver. The parasites appear to become arrested first in that fetal organ namely, the liver, which is the first to receive the blood as it comes from the placenta. Levaditi pictures spirochetes in the lumen of the hepatic vessels in certain cases the organisms do not appear to multiply in the blood however but to pass into the perivascular tissues and the glandular epithelium. There result endarteritic and periarteritic processes, infiltrations and sclerosis of the connective tissue and parenchymatous degeneration, all due, it would seem to the direct action of the organisms themselves, which are present in enormous numbers, rather than to the diffusion of soluble products. The maceration of the syphilitic fetus after intrauterine death is regarded by Levaditi as the result of a widespread secondary autolytic effect and not as due directly to the spirochetes. The presence of organisms within large phagocytic cells, especially in the pulmonary alveoli, would seem to indicate that phagocytosis is an important means of defense against this virus and especially because the organisms are seen to undergo disintegration within the phagocytes. The presence of spirochetes in the lumen of bronchi and also in the renal epithelium indicates that the sputum and also possibly the urine may be infective in hereditary syphilis. Another source of infection is seen in the skin, the papillæ of which, as well as the contents of Pemphigal vesicles, may harbor well-preserved spirochetes.

In doubtful cases the demonstration of *Spirochæta alida* may settle the diagnosis if, as seems to be the indication, this organism comes to be accepted as the causative agent of syphilis. Already interesting questions suggest themselves as to the mode of infection in congenital syphilis, especially in those cases which we now regard as paternal and conceptional.

THE ZEISS OPTICAL WORKS

Few of us who use the admirable microscopes which bear the name of Zeiss realize that when we buy one of these instruments we are encouraging a most novel and daring, if not revolutionary, industrial experiment. Carl Zeiss and his partner, Ernst Abbe (the inventor of the Abbe condenser) are not known to the scientific world as altruistic dreamers, yet the record of their experiment in profit sharing and in the application of democratic ideals to industrialism reads almost like the optimistic visions of a Bellamy.

The Zeiss optical works were started in a humble way in Jena as long ago as 1846 under Carl Zeiss, who later, in 1875, took as partner Ernst Abbe. From the first Zeiss seems to have planned the organization of the

industry on a co-operative basis, with the guarantee of personal liberty to the employes in all political matters, an unusual departure in Germany at that time. His views, however, were not fully realized during his lifetime, but were developed after his death by Abbe, a man of singular unselfishness and idealism. At Zeiss' death, in 1896, the entire capital invested in the now enormous business was left in Abbe's hands and he handed it over to an organization, the "Carl Zeiss Stiftung," which is established under the laws of Saxony with a trustee appointed by the State to supervise it. For himself Abbe reserved only the modest income of \$2,500 a year up to his death, which occurred a short time ago. The 1,300 employes, most of them highly skilled artisans, form now an association which undertakes the management of the business through committees, their avowed object being the payment of wages, not the making of profits.

The management of the works follows principles which would seem to us socialistic in the extreme. There is a regulation that the highest paid official shall not receive more than ten times the average yearly earnings of the average adult workman. An employé who has reached a certain yearly rate of wages can not after that receive any less sum on account of slack times. Most remarkable of all, in case of dismissal for no fault, after three years' employment, the workman receives at least six months' pay. Of course, there are minor advantages, such as the eight-hour work day, holidays on full pay, grants for buying homes, insurance against sickness and death, premiums for new inventions and labor-saving devices of all kinds. These apparent extravagances, however, do not prevent the company from making profits, which profits are partly distributed among the workingmen, the rest being used for extension of the works, for grants to the University of Jena, and for institutions of social amusement and education for the workers themselves. The influence of Carl Zeiss is seen especially in the provision which makes it possible not only for the artisan to join any party or trades union that he may choose, but which encourages him to hold office under the local or imperial government, granting him leave of absence on full pay for the time required to perform his public duties.

Whatever we Americans may think of the ideals of Zeiss and Abbe we must admit that their experiment, now fully ten years old, has proved itself a success in the business world and that the product of this utopian factory has probably no equal anywhere.

VIVISECTION

A correspondent has sent, for examination and comment, a pamphlet entitled "Illustrations of Human Vivisection," published apparently in Chicago by the "Vivisection Reform Society," an organization the avowed purpose of which is to make vivisection experiments a crime, except when under legal regulation.

While the tone of the pamphlet is generally unjudicial and the author seems to have a strong personal bias against at least one prominent member of our profession, we are willing to assume for present purposes that ignorance, and not wilful malice, must have been the cause of some of his illegitimate inferences, not to use another designation. We would therefore say, for his information, that, in accounts of physiologic experiments, "toxic" does not mean lethal or even necessarily dangerous, that "inoperable," from a standpoint of cure, does not mean that operation to prolong life or to make the remnant easier is unjustifiable, that the administration of pain-relieving drugs to neuralgic soldiers is not inhuman, even if the pulse and pupils were observed, and that it would be usually considered very mild treatment for military malingerers. Forty years ago comparatively little was known of the antagonism of atropin and morphin, and such observations were valuable and the world has profited by them ever since. Other suggestions might be made, but we have probably gone sufficiently out of our way now to set the author of the pamphlet right. It is to be hoped that he will be more careful in the future in his inferences and deductions. *THE JOURNAL* is in full accord with every right-minded person in denouncing reckless experimentation, but it does not expect to suit some of the antivivisectionists who, ignorantly or otherwise, reject facts when these do not conform to their theories.

GOOD RAILROAD RATES FOR THE BOSTON SESSION

The Trunk Line Association, covering the eastern railroads, as well as some of the other passenger associations, have granted a rate of one fare for the round trip, plus \$1.00, for the coming session of the American Medical Association. Undoubtedly all of the other passenger associations will take the same action, so that we may depend on one-half rates from all parts of the country. An extension of time to June 30 will be granted on payment of \$1.00. Those coming from the Pacific Coast points can have an extension of return limit up to August 31. This concession to our friends on the Pacific Coast is made, of course, on the supposition that, after coming so far, they will want to take advantage of the trip to visit friends or to see the attractions of the east. Efforts are being made to secure such arrangements that one may go by one route and return by another, as was the case last year. Whether or not such concessions will be granted on the half-rate fare is yet to be decided.

LEGISLATION TO PREVENT THE SALE OF UNDRAWN POULTRY

Senator Gallinger has introduced into the United States Senate a bill making it "unlawful for any person, firm or corporation to sell, offer or expose for sale, within the District of Columbia any poultry, refrigerated or otherwise, which has not been properly drawn and prepared by removing the viscera at the time of slaughter." Violation of the act is punishable by a fine not exceeding one hundred dollars, or by imprisonment not exceeding thirty days or both. The bill was referred

to the Committee on the District of Columbia and by that committee recommended for passage. The necessity for such legislation will be recognized by those who have given the matter thought. The keeping of meats, eggs, vegetables, fruits, etc., in cold storage has grown to such enormous proportions that it would seem that in the large cities the greater bulk of our foods is being so preserved. To what extent such foods are injurious or are depreciated in their food value has not been sufficiently investigated to come to definite conclusions, but undoubtedly many articles so preserved do depreciate in many ways and become a danger to health.

THE AUTOMOBILE NUMBER OF THE JOURNAL

To no one class of people is the automobile of more practical importance as a business proposition than to physicians. Whether in the city or country, the physician needs a means of quickly, safely and surely reaching his patients—and of getting home again. On account of this general interest of physicians in the subject, it is believed that a special number of *THE JOURNAL* devoted to a discussion of the automobile as a conveyance for physicians will be of practical interest and will be welcomed. We have had such a number in hand for some weeks, and have already received a large number of articles on the subject, but we shall be glad to hear from any physician who has had practical experience and who has not already written us. We want both sides. The expense and the difficulties connected with the machine as compared with the horse, the type of car most practical, technical points connected with gears, transmissions, cylinders, fuel, cooling apparatus, tires, etc., are important items for discussion. Articles must be brief, terse and to the point, as the space devoted to the subject must necessarily be limited. All manuscripts should be received by April 2. The date of issue will be April 21.

QUININ IN PNEUMONIA

It is possible that in emphasizing a certain point in the editorial under the above title in last week's issue we may have been misunderstood, for we came very near to actual overstatement. We said "In private practice it is no uncommon thing for a busy physician to treat 40 to 50 consecutive cases of pneumonia by the so-called expectant or symptomatic plan, and to have no deaths." It would have been better if we had said that "it may occasionally happen that a physician with a large practice," etc. Undoubtedly, in private practice, and more rarely in hospitals, a considerable series of favorable cases may be met with, especially in the young, and in these cases an unusually favorable outcome may result. We would not imply that the mortality from pneumonia is low, for we have repeatedly shown that the total mortality from this disease is pretty nearly as high as that from tuberculosis. Dr. E. F. Wells published some statistics some time ago in which it was shown that the mortality from pneumonia was 18.1 per cent. This was based on a study of 233,730 cases.¹ We repeat that

¹ E. F. Wells. *THE JOURNAL* A. M. A. 1902.

we welcome any contribution to the subject of treatment of this disease that is based on a careful study of a number of cases whether by the treatment recommended by Dr Galbraith or by that which recognizes the disease as a self-limited one and that the *vis medicatrix naturæ* will bring about a cure in the majority of instances

Medical News

COLORADO

New Hospital—The new City Hospital, La Junta, was opened February 12

Fire in Medical College—Fire did damage to the amount of \$10,000 to the Denver and Gross College of Medicine January 30

Will Erect Dispensary—The Denver and Gross Medical College will shortly erect a dispensary on two lots adjoining the College of Music at Fourteenth and Arapahoe streets

Physician Gets Damages for Injury—A verdict of \$3,500 was rendered against the Inter Mountain Improvement Company in favor of Dr Fred H Welles, Victor, who had his left leg and foot crushed between the elevator and the wall of the shaft in a building owned by the defendant, in 1902 He sued for \$50,000 damages

Eastern Practitioners Meet—The Eastern Colorado Medical Society held its annual meeting January 9 and 10 at Wray, and elected the following officers: President, Dr Earl D McGill, Wray, vice presidents, Drs W T Turner, Brush and George B Bull-borrow, Yuma, secretary Dr S S Bootay, Alron, and treasurer, Dr N J Phelan, Denver

Personal—Dr Frank N Carrier, Canon City, has been appointed physician of Fremont County, Dr James W Rambo, Florence, assistant county physician, and Dr Wilbur T Little, Canon City, county health officer—Dr F L Bartlett has been elected president, Dr John W O'Connor, vice president, and Dr William H Bergtold, secretary, of the Colorado Automobile Club, Denver—Dr Michael Beshoar, Trinidad, after fifty three years, retired from active practice February 25

January Vital Statistics—During January 939 deaths were reported equivalent to an annual death rate of 16.8 per 1,000. Scarlet fever caused 13 deaths, typhoid fever, 12 deaths, and diphtheria, 8 deaths, during the month. There were reported during the month 179 cases of scarlet fever, 75 cases of typhoid fever, 49 cases of diphtheria, and 26 cases of smallpox, an increase, as compared with the preceding month, of 60 cases of scarlet fever, 8 cases of typhoid fever, 1 case of diphtheria, and 16 cases of smallpox

DISTRICT OF COLUMBIA

Smallpox—The smallpox situation in the District is becoming serious. All the cases are said to be traceable directly to cases erroneously diagnosed, which remained unquarantined—Dr Arthur C Stanley, an interne at Garfield Hospital, is ill with smallpox

Banquet in Honor of Dr Hare—The Clinical Society of Washington gave a banquet March 10, the guest of honor being Dr Hobart Amory Hare, Philadelphia, who delivered an address on "The Relation Between Diseases of the Heart and Diseases of the Arteries"

Hospitals Get Money—By the verdict of a jury in the Probate Court, March 6, the will of the late Dr Henry E Woodbury, which bequeathed the bulk of his estate, valued at about \$35,000 to the Garfield Memorial Hospital and the Children's Hospital, share and share alike, was sustained

Want a Clean River—A determined effort is being made by the officials of the Army Medical Department, Public Health and Marine Hospital Service, Medical Society of the District of Columbia, and other organizations, to prevent the pollution of the Potomac River and to improve the sanitary conditions

FLORIDA

State Health Officer Indorsed—By a unanimous vote the Jacksonville Board of Trade adopted resolutions expressing implicit confidence in Dr Joseph Y Porter, Key West, state health officer, and urging him to withdraw his resignation. Similar resolutions were adopted by the Key West Chamber of Commerce

Hospital Closed—The Emergency Hospital, Jacksonville, was closed February 1 owing to the failure of the city council to make provisions for its maintenance

Personal—Dr and Mrs Percy J Stollenwerck, Jacksonville, have returned from Europe—Dr George W Lamar, Quincy, has been appointed by the governor, medical superintendent of state convicts

Mental Healer Imprisoned and Fined—After a trial of twelve days Helen M Post, head of the Mental Science Institute, Sea Breeze, an "absent treatment" institute, was found guilty, February 3, of using the mails for fraudulent purposes and sentenced to pay a fine of \$500 and to be imprisoned for thirty days in jail

New Sanitaria Completed—The Centro Espanol Sanitarium on the bay shore, Tampa, erected by the Spanish colony of that city and presented to the city of Tampa, was dedicated February 4—The De Soto Sanitarium, Jacksonville, which is owned and operated by local physicians and has a capacity of 50 patients, is now open to the public

GEORGIA

Damage by Fire—Dr B J Simmons, Milledgeville, lost \$1,000 by a fire which did severe damage to the business portion of the city, February 1

New Laboratory Installed—The new municipal laboratory, Atlanta, has been installed in the City Hall and is under the charge of Dr Claude A Smith, city chemist

Historic Building Demolished—The historic old medical college building, Atlanta, which was pressed into service during the Civil War as a Confederate hospital, is being torn down to make room for the new building of the Atlanta College of Physicians and Surgeons, to be erected at a cost of \$75,000

Personal—Dr Thomas R Wright, Augusta, has been re-elected a member of the governing board of the city hospitals—Dr Joseph E Allen has been elected dean of the faculty of the Medical College of Georgia, Augusta, to fill the vacancy caused by the death of Dr De Saussure Ford—Dr Edward Geddings has been elected emeritus professor of physiology and pathology in the Medical College of Georgia, Augusta—Dr George Brown, Atlanta, assistant surgeon general, has been commissioned colonel and surgeon general of the National Guard, Georgia, vice Dr Joseph A Gunn, Conyers, retired—Dr Samuel H Green, Chattahoochee, has been commissioned captain and assistant surgeon, National Guard of Georgia, and assigned to the Fifth Infantry—Dr Joseph J P Bowdoin has been elected mayor of Adairsville—Drs William W Owens, Savannah, and A P Taylor, Thomasville, have been reappointed members of the State Board of Health—Dr John M Caldwell, Augusta, city physician for the third district, jumped from his buggy when his horse ran away, February 9, and fractured his leg just above the ankle

ILLINOIS

Benefaction to Hospital—Brokaw Hospital, Bloomington, has received \$100,000 from the Brokaw estate

Acquittal—In the suit of Mrs Arthur Ruckman against Dr Isaac Moore, Alton, for slander, the jury returned a verdict of acquittal

Smallpox—It is reported that smallpox of mild type has broken out in Freeport. It is supposed that the disease was imported from Lanark

Books Given to Library—Dr Thomas J Pitner has given 300 volumes to the Jacksonville Public Library, and the sons of the late Dr David Prince have donated 700 volumes to the same institution

Physicians Vindicated—In the suit of W P Eich, Emington, against Dr Clarence P Wikoff, Emington, for damages for alleged malpractice, the physician was completely vindicated, as the plaintiff utterly failed to make a case

Personal—Dr Thomas L Catherwood, Shelbyville, was stricken with paralysis at his home, March 7—At the last meeting of the Imperial Royal Medical Society of Vienna, Dr Nicholas Senn, Chicago, was unanimously elected an honorary member of the society—Dr John L Yolton, Bloomington, was elected physician of McLean County, March 8—Dr William Hesert, Chicago, has been appointed surgeon in the Alexian Brothers' Hospital

Dr McCormack's Itinerary—Dr J N McCormack, chairman of the Organization Committee and national organizer for the American Medical Association, will spend the month of April in Illinois. In Dr McCormack's reply to the invitation of Dr

H C Mitchell, president of the Illinois State Medical Society, he urges the importance of securing the attendance of laymen at all meetings. The invitations should include senators, representatives, municipal and county officials, the pastors, bar and teachers' associations, druggists, W C T U and other clubs, as well as business men generally. He says "I am discussing the scientific and business affairs of the profession, the 'patent medicine' question, and other matters of this kind before popular audiences every day, and I find that it enables me to strengthen the profession with the public in a way that has never seemed possible before." The itinerary for Dr Mc Cormack as now arranged is as follows:

Councilor District 9—Carbondale April 2 Mt Vernon April 3
Councilor District 7—Centralla April 4 Decatur, April 5
Councilor District 8—Olney, April 6, Newton, April 7, Champain, April 12
Councilor District 6—Pittsfield, Quincy, April 9 Mt. Sterling, Virginia Jacksonville April 10, Carrolton Carlinville, Alton, April 11
Councilor District 5—Lincoln April 13 Bloomington, April 14
Councilor District 4—Galva Rock Island April 16, Monmouth, Macomb April 17 Peoria, April 18
Councilor District 2—Pontiac, April 19 Ottawa, April 20 Sterling April 21
Councilor District 1—Freeport April 23 Rockford, April 24, Aurora, April 25
Councilor District 3—Joliet, April 26 Chicago, April 27 28

The meeting places and other local arrangements will be announced in the various towns and councilor districts by letter and through the local press

Chicago

Arrest Spitters.—Acting under orders from the chief of police, a crusade has again been begun against men who expectorate in street cars and other public places

Hospital for Acute Alcoholism.—Alderman Scully has introduced an ordinance in the city council providing for the construction and maintenance of a hospital for the treatment of acute alcoholism

Sues Advertising Specialists.—Adolph Sieffert on March 12 sued the Auld Medical Company for \$80, which he claimed to have paid under contract that he was to be cured of a disease which had been pronounced incurable by physicians

Deaths for the Week.—The total deaths from all causes for the week ended March 17 were 555, 52 less than for the previous week and 2 less than for the week ended March 18, 1905. The respective annual death rates per 1,000 were 14.10, 15.44 and 14.57. Pneumonia caused 99 deaths, consumption, 62, heart diseases, 39, Bright's disease, 38, acute intestinal diseases, 30, violence including suicide, 28, and bronchitis, 26. Scarlet fever caused 9 deaths, whooping cough, 2, measles, 1, and diphtheria, 9

INDIAN TERRITORY

Hospital Established.—The Wilburton Emergency Hospital has been established by Drs U A D Collelmo, W H Horine and Arthur L Anderson

Orders Vaccination.—The Muskogee Board of Health has ordered that all school children who can not produce certificates of recent vaccination must be vaccinated.

License Revoked.—The medical board of the southern district recently revoked the license of Dr R. W Freeman, Chickasha, on the ground of dishonorable and unprofessional conduct. Dr Freeman secured a writ of supersedeas and has now brought suit for damages aggregating about \$13,000 against fellow practitioners, who he alleged were responsible for the charges which led to the revocation of his license

Society Meetings.—The Muskogee Medical Society, at its meeting January 16, adopted a resolution that all regular physicians should take their professional cards from the daily papers and should refrain as much as possible from newspaper publicity. The Medical Clinical Society met at Durant February 13, and elected the following officers: President, Dr A. S. Hagood Sterrett, vice presidents, Drs G. M. Rushing, Durant and W. M. Armstrong, Mead, secretary, Dr J. A. Humphrey, Durant, and treasurer, Dr H. W. Yates, Bokshito

INDIANA

Epidemic Diseases.—Several hundred cases of whooping cough are reported from Princeton. At Argos, north of Rochester, 172 cases of measles have been reported, with three deaths

License Revoked.—On the allegation that she has been guilty of criminal practice the State Board of Medical Registration and Examinations on March 12 revoked the license of Dr Mary A. Wherry Fort Wayne

Goshen to Have Hospital.—The Goshen Medical Society met with Dr Irvin J. Becknell, March 9, to discuss plans for a city hospital. About \$25,000 will be required for this purpose, \$5,000 of which has been bequeathed by a woman of Denver

Acquitted.—The jury in the case of Dr William H. Dings, Mitchell, charged with performing an illegal operation on Carrie Shaw at Mitchell in September, 1904, as a result of which the woman died, returned a verdict of acquittal, February 28

Newcastle Gets Epileptic Village.—It has been decided that the state epileptic village shall be located in Henry County, near Newcastle. Forty-two towns in the state were applicants for the location. The state paid \$122,882 for the site, or \$100 an acre

Condemns Criminal Practices.—The Delaware County Medical Society on March 2 passed a resolution calling on the State Board of Medical Registration and Examinations to bar from the practice of medicine all practitioners in the state convicted of criminal practices

Ross Again in Trouble.—Dr Nelson B. Ross, Muncie, whose license to practice was revoked on account of gross immorality, was arrested and taken to Newcastle, February 18, on account of an alleged connection with the death of Miss Ethel Hart, Springport, from an illegal operation

Physicians Banqueted.—A banquet was given by the physicians of Terre Haute, March 6, in honor of the fifty-fifth anniversary of the doctorate of Dr Stephen J. Young. A banquet was given by the faculty of the Indiana Medical College, March 1, in honor of Dr Henry Jameson, dean of the faculty. Dr John H. Oliver officiated as toastmaster

Smallpox.—From 15 to 20 cases of smallpox have been reported on the west side of Michigan City. About 20 cases have been reported at English, Crawford County, and the March term of court, which was to have convened at that place March 12, has been postponed. Epidemics of smallpox are reported in Miami and Fulton counties

Personal.—Dr Volney S. Cheney has resigned as health officer of Bluffton. Dr J. B. Seaman, Osceola, who was recently injured in a collision with a street car in South Bend, is improving. Dr David S. Luvville, Columbia City, is seriously ill. Dr William A. Eshelman, secretary of the Anderson board of health, has resigned to accept a position as medical examiner for the Pennsylvania System

Society Meetings.—Floyd County Medical Society met at New Albany, March 1, and elected the following officers: President, Dr George H. Cannon, vice president, Dr Walter J. Leach, secretary and treasurer, Dr Dumont Garey, delegate to the State Medical Society, Dr Elihu P. Easley, and alternate, Dr J. F. Weathers, all of New Albany. Physicians of Summitville have organized a physicians' club, with the following officers: President, Dr Winsor Austin, vice president, Dr Audley V. Fankboner, and secretary and treasurer, Dr Etta Charles

IOWA.

Pure-Food Law.—The legislature has passed a law providing for an annual appropriation of \$10,000 for a pure food laboratory and other necessary expenses

Itinerant Physicians.—There are fifteen physicians in the state practicing as itinerants. A list of these is given in the March number of the Iowa Health Bulletin

Mahaska County Medical Society.—At the meeting of the Mahaska County Medical Society, March 13, papers were read by Drs H. C. Homer, J. G. Roberts and D. C. Brockman. In the evening Prof. Henry Albert, state bacteriologist, gave an illustrated lecture on "Bacteria and Disease," to which the public was invited.

Medical Legislators.—The following are the physician members of the Thirty-first General Assembly, now in session. In the Senate, Dr Henry Young, Manson, in the House of Representatives, Drs Mark A. Dashiell, Indianola, Ross H. Gregory, Newumville, Louis J. Leech, West Branch, George McCulloch, Humeston, L. F. Summers, Milton, and Elbert W. Clark, Grinnell

Practicing Without License.—A. J. Kendig, Winterset, was tried and convicted in Madison County for practicing medicine without having procured the required certificate. B. F. Miller, an alleged drugless healer of some denomination, has been indicted by the grand jury of Black Hawk County for violating the medical practice law. The following persons were indicted by the Page County grand jury for practicing

medicine without a certificate John B. Swanson, Essex, D. W. Humphrey, Shenandoah, John L. Cox, late of Biadville, and Mrs. Thullen of Clarinda

Tuberculosis in Iowa—The board of control of state institutions has just submitted to the legislature its report on the extent of tuberculosis in Iowa and the best means of prevention and treatment of the disease. The report consists of a fifty page volume and contains considerable interesting information. According to the report there were during the year ending June 30, 1901, 4,569 cases of tuberculosis in the state, as reported by 2,416 out of the 3,532 physicians of the state, no reports having been received from 1,096 physicians in response to blanks sent out by the board of control. Of the 2,416 physicians who reported cases 1,079 had no cases to report. There is no doubt but that there are more than 4,500 cases of tuberculosis in the state. That figure probably represents two thirds of the total number, if we consider that the physicians who had no report had just as many cases as those who did report. Of the 4,569 cases reported 3,725 were of the pulmonary type and 844 were cases of tuberculosis in other organs. Women are more frequently affected than men, as shown by the figures that 2,611 of the cases were females and 1,957 were males. The following age reports are also of significance. From 1 to 10 years, 332 cases, from 10 to 20, 685, from 20 to 30 1,586, from 30 to 40, 1,076, from 40 to 50 435, from 50 to 60, 266, from 60 to 70, 161, from 70 to 80, 50, over 80 years of age, 5. It will, therefore, be seen that the vast majority of the cases are in persons from 20 to 40 years of age, very few below 10 years of age, and very few above 60 years of age. The occupation of the tuberculous individuals is also given. It states that there are 10 physicians who have tuberculosis. The report also gives the results that have been obtained by different methods of treatment in various parts of the world and ends with the following conclusions: 1. There are at least 7,000, probably 7,500 cases of tuberculosis in Iowa, 2. that the best means of preventing the spread of the disease is by informing the people regarding the dangers of tuberculosis, the reporting of all cases, prohibiting expectoration in public places, and the removal of consumptives to sanatoria.

KANSAS

New Hospital—A new hospital is to be erected at Independence to contain 25 rooms and to cost about \$10,000.

Orders Fumigation of Street Cars—The city board of health of Topeka has issued an order requiring the Topeka Railway to fumigate its street cars at least once a month.

Diphtheria Prevalent—During the month of February there were 220 cases of diphtheria and 29 deaths, as compared with 145 cases and 10 deaths for the corresponding period of 1905.

Smallpox—Four cases of smallpox have developed among the convicts from Kansas and Oklahoma confined in the state penitentiary at Lansing. The prison has been placed under strict quarantine, no convicts will be received or discharged, and no guards will be permitted to leave the prison until the quarantine is raised. More than 1,000 of the convicts have been vaccinated.

MARYLAND

Baltimore

Health Report—Five cases of smallpox were reported during the week ended March 17. Diseases due to cold and wet were in the majority. The deaths from pneumonia were 37, from consumption, 32, from bronchitis, 7, from influenza and whooping cough, each 5.

Personal—Among those who will go abroad this summer are Drs. Randolph Winslow, J. Mason Hundley and Frederick Dobyns. Dr. Ira Remsen, president of the Johns Hopkins University, is in California this week, attending a meeting of the American Universities, held under the joint auspices of Leland Stanford and California universities at San Francisco, March 14 to 17. Dr. Thomas S. Cullen sailed on March 14 for a trip of several months through Europe. Dr. William A. Parvis is recuperating his health at Mount Jackson, Va., and will leave for Colorado June 15. Dr. Summerfield B. Bond has been appointed chief medical examiner of the Baltimore & Ohio Railroad. Dr. Harry D. Purdum has resigned from the resident staff of the University Hospital to accept a position in a Michigan insane hospital.

Tuberculosis Bills—There are now two bills before the legislature for a tuberculosis sanitarium, one asking an appropriation of \$100,000 the other of \$25,000. The former contemplates a state institution, the latter simply an appendage to the present Endowment Consumptive Hospital. It is claimed by

advocates of the second bill that contributions can hereafter only be secured for the proposed institution by its remaining private, and that, in fact, a large amount has already been secured. The state bill, however, has the backing of the profession and was urged at Annapolis, March 13, by Drs. Welch, Thayer, Finney, Fulton, Hocking and others. While advocating the state institution these gentlemen, however, are not opposed to the appropriation also asked for the Endowment institution, over which Dr. Henry Barton Jacobs presides and in which he is specially interested.

MISSOURI.

Hospital Opened—The Sisters of Mercy at Springfield, Mo., opened to the public on February 22 the new St. John's Hospital, recently erected at a cost of \$50,000.

Accident—Dr. R. Wood Brown, Kansas City, sustained a fracture of the left leg in a fall from a street car, January 24, and lay in the street for more than four hours before help was rendered him.

St. Louis Urological Society—This society was organized March 16 with twelve charter members. Dr. Bransford Lewis was elected president, and Dr. Eugene A. Scharff, secretary and treasurer.

Fined for Illegal Practice—Dr. R. D. Haley, an advertising specialist, and his assistant, C. W. Laybourn, St. Louis, were each fined \$500 for practicing medicine without a license, February 28. They both gave notice of appeal.

Goes to Prison Unguarded—Dr. Joseph D. Todd, Richards, was sentenced to imprisonment for twelve years for the murder of Robert Wall and appealed, being released on bail. When the decision of the lower court was affirmed by the Supreme Court, March 6, he went to the penitentiary and reported to the warden to begin serving his sentence.

Personal—Drs. Augustus C. Bernays, George W. Cale, Jr., Willard Bartlett and John M. Dean have gone to Rochester, Minn., for a week. Dr. and Mrs. Jefferson D. Griffith, Kansas City, sailed for Europe, February 8. Dr. Charles M. Johnson, St. Charles, celebrated his eightieth birthday January 28, and his golden wedding anniversary on February 26.

NEW YORK.

The Epidemic at Yonkers—The epidemic of tonsillitis in this city continues unabated and hundreds of people are confined to their homes.

Brooklyn's Water Supply—Bills have been introduced into the legislature repealing the laws of last year prohibiting New York City from going to Long Island for a water supply, and giving Brooklyn permission to get water from Suffolk and Nassau counties.

Oppose Osteopathy Bill—The State Department of Education has issued a formal statement to the members of the legislature declaring that, contrary to widely circulated reports, the department was opposed to the pending bill to secure legal recognition for the practice of osteopathy in the state. They assert that the state should not recognize any school of practice in medicine any more than any special creed or cult.

Personal—Dr. F. Park Lewis, Buffalo, will spend the summer in Europe. Dr. Roswell Park, Buffalo, has resumed his work after his severe illness. Drs. Harvey Gaylord and G. Clowes of the New York State Cancer Laboratory, Buffalo, have sailed for Jamaica. Dr. Burt C. Johnson, Buffalo, has gone to Europe. Dr. William Mabon has been appointed superintendent of the Manhattan State Hospital, Ward's Island.

Osteopathic Legislation—The osteopaths have again begun a campaign for medical license from the state. At a recent hearing at Albany Mr. M. W. Littleton spoke before the committee of the Assembly and the Senate. The medical profession was well represented in opposition to this bill. Last year the committee rejected the bill, and it is sincerely hoped that a similar fate awaits it this session. Assemblyman Cox has introduced a new osteopathic bill which provides for a separate board of examiners and a three year graded course.

Milk Decision Affirmed—The validity of the law of the state prohibiting the vending of milk containing less than 12 per cent of milk solids was argued before the Supreme Court of the United States in the case of Frederick St. John, a Buffalo milk dealer who was arrested for violating the law. The Supreme Court of New York affirmed his conviction and the constitutionality of the law, denying his plea that it deprived him of the equal protection of the law guaranteed by the federal Constitution. St. John's complaint was that the trial jus

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tice refused to allow him to prove that the milk he sold was in the same condition that it came from the cows and had not been adulterated, thus depriving him of the chance to prove his innocence.

Society Celebrates Centennial.—The Medical Society of the County of Rensselaer celebrated the one hundredth anniversary of its organization at Troy, February 22, with a banquet at which 125 members and guests were present. Dr. C. Howard Travell, the president, officiated as toastmaster, and addresses were made by Corporation Counsel George P. Wellington, who spoke on "Scientific Politics", Dr. William M. Polk, New York City, who responded to the toast of "The Physician and the Layman", County Judge Michael E. Tierney, who spoke of "The Physician in Law", Prof. William D. Mason of the Rensselaer Polytechnic Institute, who responded to the toast "Professional Education," and Dr. R. Brockway, Bontecou, the Nestor of the society, who gave an exhaustive résumé of the growth and development of the organization.

Sea Side Hospital and Convalescent Home.—Assemblyman Tompkins has a bill before the legislature which creates a commission for the purchase of a stretch of ocean front on Long Island to be converted into a free park and convalescent home. This measure was first proposed by Mayor McClellan of New York in a message to the board of aldermen, in which he said "Provision must soon be made by the city toward securing fresh air homes for children and convalescent patients from the city hospitals as well as breathing spaces for the whole people." It is proposed to set aside \$2,500,000 for this excellent project. Anticipating the passage of the bill, sites have been discussed and suggested at Long Branch, Coney Island and Rockaway Beach. This building of hospitals and convalescent homes by the sea though apparently a modern idea is ancient, for in antiquity they built temples to Æsculapius near the sea side, and many great and ancient institutions of medical renown were situated on the sea side. This is particularly true of the great school of Salerno, one of whose teachers, a woman, Tratula, wrote a treatise on the value of sea baths.

New York City

Ball for Hospital.—Beth Israel Hospital's annual Purim ball was held March 14, when \$10,000 was realized for this hospital.

Hospitals Crowded.—It has become necessary to set apart two wards of Bellevue Hospital for tuberculosis patients, as there is room for no more tuberculosis patients at Blackwell's Island. As a result of this action the medical wards of Bellevue are somewhat overcrowded.

Health Department After Fur Dealers.—Notices have been served on dealers in raw furs in the business district that they must ventilate their work rooms from the top or stop dealing in "green" furs. The department insists that they shall ventilate through the roofs and then apply for a permit to do business as the law requires.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended March 10, 2,384 cases of measles, with 55 deaths, 436 cases of diphtheria, with 62 deaths, 414 cases of tuberculosis, with 187 deaths, 250 cases of scarlet fever, with 13 deaths, 30 cases of cerebrospinal meningitis, with 25 deaths, 17 cases of typhoid fever, with 3 deaths, and 171 cases of varicella, making a total of 3,702 cases, with 345 deaths.

Street Cleaning and Pure Food.—A resolution for the issuance of special revenue bonds to the amount of \$25,000 for the special investigation of the street cleaning department was adopted at the last meeting of the board of aldermen. A resolution was also adopted urging the legislature to grant Dr. Darlington an appropriation for the investigation of the purity and healthfulness of foods, wines and beverages manufactured and sold in this state.

Concealed Measles.—Health inspectors in the Bronx have discovered that no less than 50 cases of measles in well-to-do families were not reported by the attending physician, and in cases where no physician was summoned mothers and nurses were charged with willful neglect. These cases were all located in the neighborhood of the Bedford Park school and have had such an effect on the attendance that the school may have to be closed. Several children attended school while affected with the disease and the health department has ordered a thorough investigation.

Homes for Medical Students.—The woman's advisory board of the Students' Club, the intercollegiate branch of the Young Men's Christian Association, is endeavoring to enlarge the work that it is conducting for medical students. John H. McCracken stated that there were not as many medical students in New

York as there were twenty years ago, owing to the lack of accommodation, and that if there was one class of men neglected more than another it was the medical students. It was right that more attention should be given to the housing of medical students and efforts would be made to enlarge the home so that forty men could be accommodated. The board has \$2,000 toward furnishing the new home.

Transfer of Dying Patients.—The practice of transferring dying patients from one hospital to another for the purpose of keeping down death rates has been criticised from time to time, and several deaths that have occurred recently have brought this matter to the attention of the coroners, who have framed the following resolutions:

Resolved, That this is in violation of all principles of justice and humanity and meets with our disapproval that we not only object but protest, and ask that all persons in charge of hospitals take measures at once and instruct the physicians in charge of patients not to remove them to other hospitals when conditions are such as to endanger the lives of the patients and it is further

Resolved, That if this matter is disregarded this board will take stringent measures to bring the violator to justice.

NORTH CAROLINA.

State Society Meeting.—The Medical Society of the State of North Carolina will hold its fifty third annual session in Charlotte, May 29, 30 and 31. The State Board of Medical Examiners will meet in the same city May 24.

Hospital News.—Mercy General Hospital, Charlotte, was formally opened and dedicated February 26. Two Philadelphia surgeons have purchased the old military school building at Rutherfordton and will erect a hospital and sanitarium to cost \$25,000.

January Deaths.—During January 222 deaths were reported, equivalent to an annual mortality of 17.1 per 1,000. Pneumonia caused 44 deaths, consumption, 23, heart disease, 16, brain diseases and diarrheal diseases, each 14, nervous diseases, 10, and accidents and violence, 9.

Personal.—Dr. James S. Lafferty, Concord, has removed to Greensboro. Dr. Peter E. Hines, Raleigh, is critically ill with cerebral hemorrhage at his home. Drs. Ginnada T. Sykes, Grissom, and Erwin Q. R. Houston, Davidson, recently suffered severe losses by the burning of their residences. Dr. Hubert A. Royster, Raleigh, has retired from general practice and now devotes himself exclusively to surgery and gynecology. Dr. Richard H. Lewis, Raleigh, has been elected president, and Dr. Chase P. Ambler, Asheville, a member of the executive committee, of the Audubon Society of North Carolina. Dr. McTyeire G. Anders, Connolly Springs, has located in Gastonia.

The Matthews Case.—Dr. Joseph B. Matthews, Greensboro, who was held after a preliminary hearing before a magistrate for trial at the next session of the Guilford Superior Court on the charge of having murdered his wife, was found guilty and sentenced to imprisonment for twenty years. The evidence was of a most serious nature. Three physicians who were called into the case found Mrs. Matthews in a dying condition from an excess of morphin, and it was with great difficulty and prolonged efforts they succeeded in reviving her. Constant efforts were made during the day by Dr. Matthews to get the physicians out of the room on various pretexts. Finally in the afternoon he succeeded, and returning after a short absence, two of the physicians discovered Dr. Matthews injecting a concentrated solution of strychnin into his wife's body. Her death ensued shortly after with the characteristic symptoms of strychnin poisoning.

NORTH DAKOTA.

Personal.—Dr. D. Tufte, Fargo, has returned after six months in Europe. Dr. J. Dempster Taylor, Minot, has been re-elected physician of Ward County.

New Hospitals.—The new hospital for the insane at James town has just been completed at a cost of \$60,000. The Lutheran Hospital Association has decided to erect a hospital at Rugby, to cost about \$30,000.

Births and Deaths of 1905.—The secretary of the State Board of Health reports that during 1905 4,912 births were reported to the board and only 1,747 deaths. Of the latter 479 were due to communicable diseases.

Agreement Regarding Insurance Examinations.—Physicians registered and practicing in the sixth counselor district, believing that the duties of insurance medical examiners require a high degree of professional skill, absolute integrity and special attention to the interests of the insurance companies have pledged themselves to exercise skill and care in all examina-

tions and to make no discrimination in examinations or fees to different companies. They agree to be governed by the following schedule of fees: \$5 for each ordinary examination, including urinalysis, \$10 for each examination where microscopic examination of urine, sputum or other secretion is required, and \$3 for each certificate of health for renewal of lapsed policy. This agreement has been signed by all the physicians in Burleigh and Kidder counties, and copies have been sent for signature to the physicians in the other counties in the sixth judicial district.

OHIO

Hospital Needed—Middletown is in urgent need of a hospital and Dr David B Bundy has offered \$1,500 toward the establishment of such an institution.

Dr Haugh Found Guilty—Dr Oliver C Haugh, Dayton, charged with the murder of his father, mother and brother, was found guilty, March 9 of murder in the first degree.

Injured and Ill—Dr James W Ward, Little, suffered a serious injury to one of his eyes a few days ago.—Dr Addison K Kirkpatrick, Pekmansville has been taken to Cincinnati, where he will undergo a surgical operation.

Hospital Patients in Peril—The Cleveland Homeopathic Medical College was practically destroyed by fire March 9, and the Huron Road Hospital, with its 63 patients, was placed in grave jeopardy thereby. Fortunately a panic was prevented, but one patient died from shock.

White Hospital Report—The annual report of the White Hospital, Ravenna, for the year ended Jan 1, 1906, shows that 192 surgical cases, 103 medical cases, and 23 obstetrical cases were received during the year. Six patients were moribund on admission and, including these, there were 13 deaths during the year.

A Frank Confession—Health Officer Allen of Cincinnati has received the following name letter from a delinquent dairy man: "I have investigated, and find that my night men, instead of putting filtered water into the milk, used hydrant water. You see, I have been putting one gallon of water into every can of milk because the cows give so little milk now and it is so rich."

Personal—Dr William S Bond, Hubbard, is recovering from an attack of pneumonia.—Dr Daniel A Berndt, Portsmouth, has been appointed assistant surgeon of the Norfolk & Western Railway.—Dr Harry R Geyer has been appointed work-house physician of Zanesville, vice Dr Herbert J Sheppard, resigned.—Dr Harrie B Martin, Springfield, has returned after two years abroad.—Dr Rufus D Jacobs, Vinton, who has been seriously ill, is improving.

PENNSYLVANIA.

Smallpox at Bethlehem—A case of smallpox was reported in South Bethlehem, March 11. The victim was a Russian immigrant, who landed in New York twelve days before. It is stated that she was allowed to land by the United States quarantine officials in New York, although she had no marks indicating previous vaccination.

Free Hospital for Poor Consumptives—The report of the Free Hospital for Consumptives, White Haven, for the year ended March 1, shows that 540 patients were treated in the institution. There were but 2 deaths, one of these an employe of the institution and the other a female patient about to be discharged, both deaths being due to pneumonia. There were 114 patients in the sanatorium March 1, 1905, and 426 patients were admitted during the year. The patients discharged during the year numbered 268, while those leaving numbered 134. On February 28, 133 persons remained at the sanatorium. Of the total number of patients treated the report states that in 142 the disease was arrested, in 85 the condition was greatly improved, 83 were reported improved, and 76 not improved. During the year 165,820 quarts of milk were used, and 281,766 eggs, at a cost of \$7,192.64 for milk and \$5,765.51 for eggs. The receipts for the year were \$73,587.03, and expenditures, \$73,585.72.

Philadelphia

Announcement—At the March 28 meeting of the Philadelphia County Medical Society a symposium on sanitary and moral prophylaxis will be held, and the educational movement for the prevention of venereal disease will be fully considered. The meeting will be addressed by Dr Prince A Morrow of New York City.

Smallpox Appears—One case of smallpox was reported during the week in a colored child. This is the first case of this

disease reported for fifteen months, and every effort is being made by the authorities to prevent the spread of the disease. All the houses in the immediate neighborhood were quarantined and fumigated.

Personal—Dr George W McCafferty has been appointed to succeed the late Dr David D Richardson as resident physician of the State Hospital for the Insane, Norristown.—Dr Clarence A Vasey has returned from a visit to southern California.—The report that Dr J C McCracken, who represents the University of Pennsylvania in China, was injured in the recent riots, is unfounded.

Examinations for Internships—The following hospitals have announced the dates of their examinations for resident physicians: St Joseph's Hospital, Philadelphia, May 1, six vacancies to be filled, term of service, sixteen months. Methodist Episcopal Hospital, Philadelphia, April 12, and Allegheny General Hospital, simultaneously in Philadelphia, Pittsburg and Ann Arbor, Mich, April 7, at 9 a m.

Addresses—Dr Richard Hunt, Washington, D C, addressed the Pathological Society of Philadelphia, March 22, on "Studies in Metabolism in Relation to Alcoholism".—Dr Casey A Wood, Chicago, addressed the section on ophthalmology at the College of Physicians, March 20, on "Some Forms of Hereditary Cataract".—Dr Philip P Calvert addressed the Fortnightly Club of Mount Holly, N J, March 12, on "Historical Sketch of the Discovery of the Deep Sea Animals".

Medical Staff of Widener Memorial—The medical staff of the Widener Memorial Home for Crippled Children, which was formally opened March 3, will be composed of the following men: Surgeon-in-charge Dr DeForest Willard, assistant surgeon, Dr Edward B Hodge, Jr, visiting physician, Dr Albert D Ferguson, pediatricist, Dr Alfred Hand, Jr, neurologist, Dr William G Spiller, ophthalmologist, Dr G Oram Ring, assistant ophthalmologist, Dr Carl S Williams, laryngologist, Dr Francis R Packard, dermatologist, Dr Jay F Schamberg, and pathologist, Dr Robert L Pitfield.

Medical Visits to Schools—The report of the work of the assistant medical inspectors in the bureau of health during February shows that 5,985 visits were made to the public schools, in which 19,818 pupils were examined. There were 1,004 pupils excluded from school on account of illness, 553 of whom were girls and 511 boys. Of the number excluded 247 were suffering from measles and 118 from measles contact, 11 from diphtheria and 9 from diphtheria contact, 6 from scarlet fever and 6 from scarlet fever contact, 42 from chickenpox, 35 from acute conjunctivitis, 32 from ringworm, 100 from mumps, and 2 from erysipelas. The inspectors performed 121 vaccinations and, in addition, reported 3,143 children to their parents as being in need of medical attention.

Health Report—The total number of deaths reported for the week reached 591, as compared with 633 reported last week, and 589 reported in the corresponding period of last year. The principal causes of death were: Typhoid fever, 26; measles, 19; scarlet fever, 3; whooping cough, 4; diphtheria, 16; meningitis, 2; consumption, 70; cancer, 25; apoplexy, 20; heart disease, 54; acute respiratory disease, 96; enteritis, 34; appendicitis, 5; Bright's disease, 43; puerperal sepsis, 5; suicide, 5; accidents, 16; and marasmus, 4. There were 448 cases of contagious disease reported, with 48 deaths, as compared with 357 cases and 46 deaths in the previous week. The number of contagious disease cases reported shows, therefore, a large increase over the previous week, particularly in diphtheria and typhoid fever, 117 cases of the former and 287 of the latter being reported, as compared with 77 cases of diphtheria and 231 cases of typhoid in the previous week.

Money for Charity—At the meeting of the executive committee of the twenty sixth annual charity ball the treasurer was authorized to distribute \$2,350 to each of the following beneficiaries: Hospital of the University of Pennsylvania, Jefferson Medical College Hospital, Howard Hospital and St. Timothy's Hospital.—By the will of the late Edward T Dobbins the following institutions are named as beneficiaries: Women's Medical College Hospital, to endow a free bed, \$3,000; Women's Medical College, to pay tuition for the regular course of instruction in medicine of a young woman who can pass the necessary examination, preference being given to a graduate trained nurse, \$3,000; Burlington County Hospital, \$5,000; Philadelphia Home for Incurables, \$5,000, to maintain a scholarship at the Philadelphia College of Pharmacy, to be conferred on a New Jersey apprentice passing the highest preliminary examination \$2,500; Christ Church Hospital, \$10,000, and Hospital of the Women's Medical College,

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\$10,000.—As a result of an autograph auction book sale held at the Germantown Cricket Club \$800 was realized, which is to be donated to the Germantown Hospital

GENERAL

Gastro Enterologists to Meet at Boston—The ninth annual meeting of the American Gastro Enterological Association will be held at Boston, June 4 and 5, 1906. The president's address, "The Mutual Obligations of the Surgeons and Internists in the Proper Development of Gastric Surgery," will be by Dr H W Bettmann, Cincinnati.

Prevention of Yellow Fever—In response to the request of a number of citizens of New Orleans, six surgeons of the Public Health and Marine Hospital Service have been assigned to visit the parishes adjacent to that city to assist the state authorities in such measures as may be necessary to prevent a recurrence of yellow fever during the coming summer.

Cholera in the Philippines—Dr Heiser, chief quarantine officer at Manila, states in *Public Health Reports* that there is a gradual increase in the number of cases of cholera reported from the provinces. Many cases of the disease are occurring among the fishermen and others who are employed on the small craft which ply between the upper end of Manila Bay and the numerous rivers which lead into it from Bulacan and Pampanga provinces. The infected territory is lowland and marshy. The villages are built along the banks of the rivers on insanitary sites. If there is any considerable increase in the number of cases, the direct drainage into the rivers will no doubt soon infect them and then a more serious epidemic is to be expected. The eradication of the disease will be exceedingly difficult, and under the most favorable circumstances a number of months will probably elapse before the disease can be checked in these provinces.

Quarantine Regulations for Fruit Vessels—Strict regulations are to be enforced regarding fruit vessels at foreign ports suspected of being infected with yellow fever. The captain or his representative is to be the only person allowed to land, and that only to enter and to clear the vessel, and then only in the daytime. No one from the shore is to be allowed to board the vessel, except customs officers and the agent of the ship. Fruit intended for shipment on vessels lying at docks is to be graded and payment made for it on shore or at the dock. Passengers must embark at the regular ports and must have been under observation by a United States sanitary inspector for at least five days prior to the departure of the ship. The vessel must not lie where the crew will be exposed to the danger of contracting yellow fever, and at ports where the vessels lie at wharves the vessel must be moved into the stream or at least 200 meters from the wharf before sunset, and not returned to the wharf before sunrise the following day, except at ports where previous permission has been obtained. Water tanks, water buckets and other collections of water about the vessels are to be guarded in such manner that they shall not become breeding places for mosquitoes. The destruction of mosquitoes aboard must be insured as far as possible by the simultaneous fumigation—two pounds of sulphur per 1,000 cubic feet, all openings closed for two hours—of all compartments which can be so treated without injury to the cargo. Pyrethrum powder may be substituted in the engine room at the option of the medical officer. The vessel is to sail immediately after this fumigation is completed. All baggage is to be rigidly inspected and the exclusion of mosquitoes assured. Fruit vessels plying between United States ports and fruit ports where yellow fever is known to exist will not be admitted to entry under the provisions of these special regulations until they have been not less than five days from the port of departure before being admitted to pratique at the quarantine station at the port of arrival. Fruit vessels without certificates of the United States sanitary inspectors at foreign ports and fruit vessels infected with yellow fever will be subject to the general quarantine regulations of the United States. Persons exposed to infection in unloading cargoes on to lighters shall be detained after such exposure as provided for other persons exposed to yellow fever. Any officer of a fruit vessel detected in evading or violating these special regulations shall forfeit, for any vessel on which he may subsequently be found, or be engaged, any participation in the special privileges accorded by these regulations. Fruit vessels trading with any ports infected with yellow fever must carry a competent, qualified physician. Fruit vessels arriving with yellow fever on board or having had yellow fever on board during the voyage will be quarantined. The personnel shall be removed with the exception of the master the living apartments thoroughly disinfected, the ves-

sel provided with a new crew, sufficient to care for her, and towed to the docks for the discharge of cargo. On completion of the discharge of cargo the holds are to be fumigated with sulphur and the vessel towed to the quarantine station to take on her crew before proceeding to sea.

FOREIGN

Immunity of Lime Workers to Tuberculosis—We are informed that a communication signed by more than a thousand physicians is to be presented at the approaching International Medical Congress on the subject of "Immunity to Tuberculosis of Workers in Lime and Gypsum Kilns." The *Siglo Medico* publishes an appeal for all physicians who have any experience in the matter to inform those getting up the article. Address Dr G Fisac, provincia de Ciudad Real, Damiel, Spain.

Moritz Steinschneider—The international journal devoted to the history of medicine and medical geography, *Janus*, in its issue for February, pays homage to the oriental student, Moritz Steinschneider, who reached the age of 90 March 30, 1906. He is still actively engaged as occasional assistant at the Berlin Royal Library. His researches on the pharmacology, toxicology, medicine and natural sciences of the Arabian and other writers during and just preceding the Middle Ages will be a mine of information for generations of scientists yet unborn.

Smallpox in India—The epidemic of smallpox which began in Calcutta in December shows no signs of abatement. It is impossible to determine accurately the number of cases or deaths, as they are rarely reported to the health department. Hindoos of all classes are averse to hospital treatment of every kind, and they dislike to have any disinfecting operations carried on in their houses. They also look on smallpox as a very ordinary visitation. Because of these facts they not only do not report cases, but conceal them. It is estimated that there have been about 5,500 cases since December.

Medical Boycott in Italy—Under the heading "Boicottaggio del Comune di Lentini," the *Gazz degli Ospedali* for March 1 publishes an appeal from the president of the National Association of District Physicians. He calls on the presidents of the various local medical associations and the members to stand by Dr L. Piazza, until recently district physician in the commune of Lentini. He has always conducted himself with honor and professional devotion, and his abrupt dismissal by the local authorities was an undeserved insult. The commune is now without a district physician, and it is proposed to boycott it until Dr Piazza is restored to his position or reparation offered.

Recrudescence of Plague in Brazil—Recently 11 fatal cases of plague have been reported in Bahia. The number of other cases is not stated. The outbreak appears to be a recrudescence and not new cases introduced from Rio de Janeiro or other Brazilian ports. During the week ending January 21, 2 deaths from bubonic plague were reported in the city of São Paulo. These cases appear to have occurred in individuals arriving there from other ports, one of these patients had lately been in the city of Rio. During the last three years sporadic cases have from time to time made their appearance in that city, but there has never been anything pointing to any infection of the city itself.

Medical Institutions Founded as Anniversary Presents—As already mentioned, the emperor and empress of Germany announced some time ago that on the occasion of their silver wedding they would prefer not to have personal gifts made to them, but rather to have the occasion celebrated by endowments of charitable and medical institutions. Their cities have announced their intention of founding various institutions, representing a total expenditure of more than \$600,000. The list includes homes for convalescents, for infants, means to reduce infant mortality, hospitals for the blind asylums, sanatoria, etc. Several of the institutions are to be endowed by private individuals. Berlin has appropriated funds for a sanatorium for lung affections, for the model infant asylum, for a maternity, and for a "night nursery." The largest amount was given by Breslau—\$90,000—to found an infant asylum.

New Journal of Applied Hygiene—The first number of a new French monthly, *L'Hygiène Générale et Appliquée*, has been received. It has been founded by Chantemesse professor of hygiene at Paris, chief of the national sanitary service. Its aim is to popularize hygienic measures and record their successful application. The first number opens with a sketch by Chantemesse of the late epidemic of yellow fever in New Orleans and the lessons to be learned therefrom. The second

title describes the workings of the course in hygiene entitling to a diploma, recently organized at Lyons. Forty-nine persons are taking the course, including a number of pharmacists, architects, chemists, and teachers, as well as physicians and medical students. Requests have already been received for an evening course of lectures for persons employed during the day. Other articles are on the "House Book," and other topics connected with hygiene. The editors urge the readers to send in reports of successful stamping out of epidemics or of eradication of insidious conditions, and to ask questions on any subject in the line of sanitation or hygiene. Replies by experts will be published in the monthly. It is issued by O. Dorn, Place de l'Odéon, Paris. The subscription is 12 francs, or about \$2.10, including postage.

German Sleeping Sickness Commission to Africa—The German government has appropriated about \$30,000 for the expenses of a scientific commission to study sleeping sickness in Africa. Robert Koch is to head the party, which will include Drs. Beck and Kleins, his assistants on his former trips. His wife will accompany him as usual. The party sails from Naples April 16 and expects to be gone a year and a half. In an address delivered recently in Berlin Koch described the history and onward march of sleeping sickness in Africa, where it has been known since the beginning of the last century. At first confined to the west coast, it has now spread to the north shore of Lake Victoria Nyanza, and is threatening the German possessions. He remarked that nearly a quarter of a million people had probably died from the disease, whole villages having been thus depopulated, on certain islands he found that the inhabitants had died to the last person. No remedy is known for the disease, the main hope is to exterminate the insect in which the germ breeds. This might possibly be accomplished, he said, by burning the undergrowth in its haunts. It is only a few months since Koch returned from a scientific trip to Eastern Africa, bringing back several new data in regard to trypanosoma infection and other tropical affections, as was mentioned in these columns on page 1888 of the last volume. His illustrated communication on the subject was published in the *Deutsche Med. Wochschr.* for Nov. 23, 1905, page 1865. A brief summary was given in these columns on page 236 of the current volume.

Official Postgraduate Instruction in Germany—An imposing four-story building was dedicated in Berlin on March 1, which is unique in its design, its construction and its purposes. It owes its inception to the late Empress Frederick, who from her deathbed impressed on the authorities the importance of up-to-date training for practicing physicians. Within a year twenty-four local centers had been formed for postgraduate instruction, and more than a third of all the physicians of the realm had taken advantage of the courses offered. The importance of the mechanical arts for the development of medicine was being recognized more and more. The perfected microscope, the Roentgen equipment, etc., required technical skill of the physician in which he had not been trained. To meet these wants and centralize and economize efforts in this line, the building known as the "Kaiserin Friedrich Haus" has been erected by popular subscription, costing about \$400,000. The first floor is devoted to the permanent exhibition of medical and surgical instruments and appliances, medical electricity, optics and medical chemistry. On the next floor is a reading room, an assembly hall and a permanent exhibition of tropical medicine, models and other plastic reproductions for teaching purposes and more exhibits of optical and mechanical devices. The floor above is devoted to the exhibits which are to be loaned out to other postgraduate centers—traveling exhibitions. The upper floor contains lecture rooms and laboratories for chemical chemistry and microscopy, bacteriology and experimental therapy, and for Roentgen work and scientific photography in general. The reading room is to contain the medical journals of the world and a small collection of the latest manuals, atlases and illustrated compendiums. The assembly hall has 200 seats, with standing room for 40. Each seat has a small writing table attachment, and the blackboards and tablets on the wall are arranged so that they can be raised or lowered instantaneously, leaving the calcimined wall free for the lantern views. The loan exhibits are not arranged for museum purposes but any or all of the objects in them can be loaned to physicians, teachers, lecturers, etc., for instruction of the general public or special classes, as well as to physicians. Various persons, especially physicians, have donated the funds to equip certain parts of the establishment in which they are most interested. The funds contributed have not all been expended and remain as a permanent endowment. The state also aids in the support of the institution. The *Zeitschrift f. aerztliche*

Fortbildung, of which Dr. R. Kutner is editor, is the official organ of the "Aerztliche Fortbildungswesen," as the entire postgraduate movement is called. Its editorial office has been removed to the new building, Berlin NW 6, Luisenplatz 24. The issue for March 1 contains an illustrated description of the ceremonies attending the opening of the house, as part of the silver wedding celebration for the royal pair, with a view of the building and diagrams of the various floors. Sir Felix Semon represented Great Britain at the ceremonies, Blondel, France, and von Gross, Hungary.

LONDON LETTER

The Duration of the Medical Curriculum

An important report on the duration of the medical curriculum has been presented to the Royal College of Physicians by the Committee of Management of the Conjoint Examining Board in England, consisting of Dr. F. Taylor, chairman, Dr. Norman Moore, Dr. E. Living, Mr. J. Langton, Mr. E. Owen and Mr. R. J. Godlee. In 1890, the duration of the medical curriculum was extended from four to five years. It was hoped that the additional years would lead to more thorough study of practical subjects before the final examination. In the opinion of most teachers, however, this result has not been attained, for, owing to the greater demands on the student's time by the accessory scientific subjects, less time is devoted to practical subjects than formerly. It has been suggested that another year be added to the curriculum or that the student be required to pass the preliminary scientific examination in chemistry, physics and biology before commencing his five years' education at a medical school. The latter proposal, at the instance of the council of the Royal College of Surgeons, was referred to the committee of management of the conjoint board. The committee thought it desirable to ascertain the present length of the curriculum and how long it takes the average student to pass all his examinations. Analysis of the records of 400 students who obtained the diplomas of the conjoint board during the last two years shows that only 8.5 per cent passed the final examination in five years and only 28 per cent in less than six years, 71.5 per cent took six years or more to pass and 34.5 per cent took more than seven years. These figures are derived from a period when the regulations adopted by the Royal Colleges in June, 1904, had not come fully into operation. It is not improbable that under these new regulations a year may be added to the total period of study required before the final examinations. Probably the student will take from five and one-half to seven years in his medical education. This is a serious prospect for parents, and suggests that the present system is too much for the capacity of students. The committee of management of the conjoint board is of opinion, however, that any alteration in the present regulations is undesirable.

The Liverpool School of Tropical Medicine.

The report of the Liverpool School of Tropical Medicine again shows a record of much good work accomplished by this enterprising institution. A special research on trypanosomiasis was carried on in connection with the Congo expedition. This school has an advantage over the services of the staffs of the allied sciences, who are also working along this line in the Johnston laboratories, viz., the comparative pathology department, the veterinary school of the University of Liverpool, the biochemistry department and others. The Johnston laboratories of the University of Liverpool, where accommodation for the research work and teaching of the school is provided, were presented to the university by Mr. William Johnston. The buildings are on the east side of the celebrated Thompson-Yates laboratories which they adjoin. They are 90 feet long and 47 feet wide at their broadest part, and 34 feet wide at their narrowest. They contain four floors (connected by staircases and by an elevator), each devoted to separate departments of study and research and under the control of various professors and lecturers. The basement is devoted to comparative pathology and is under the control of Dr. Annett. The ground floor is devoted to tropical medicine and is controlled by Professor Ross. The first floor is devoted to the study of experimental medicine, including experimental investigation in medicine, pathology, physiology, bacteriology and allied subjects under the superintendence of the professors of physiology and pathology. One set of rooms is devoted exclusively to cancer research under the direction of Mr. J. E. S. Moore. The second floor is assigned to biochemistry, and is presided over by Prof. Benjamin Moore. The laboratories of tropical medicine occupy a room about

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95 feet long and 35 feet broad. The main part of the room is devoted to students, but three chambers are partitioned off for the special use of individuals who wish to do research work in connection with tropical medicine and parasitology. There is accommodation for forty workers. The partitions of the room are fitted with cupboards, in which the museum of tropical diseases, which the school is now forming, is being arranged.

A Comparison of Fresh and Concentrated Infusions.

In order to determine whether concentrated infusions of drugs are, from a pharmaceutical standpoint as good as fresh infusions, Mr E. H. Farr and Mr R. Wright, examiners to the Pharmaceutical Society, prepared a series of official infusions and of corresponding concentrated infusions for purposes of comparison. Though they had a predilection for fresh infusions, they found that in the majority of cases the concentrated infusions were quite as representative of the drug. The concentrated infusions of broom, cloves, orange, and, to a less extent, buchu and roses, were inferior to fresh infusions. On the other hand, concentrated infusions of senna and valerian were superior to fresh infusions. In the case of buchu there is the difficulty that the drug contains volatile oil and mucilage, both of which are therapeutically valuable. An alcoholic preparation does not dissolve the mucilage, on the other hand, a certain amount of volatile oil accompanies the mucilage into solution in an aqueous infusion. It is satisfactory to know that concentrated infusions in general fully represent the drugs from which they are prepared, but as in many cases they can be prepared only by the use of alcohol, they can not be considered therapeutically as equivalent to fresh infusions.

The King's Sanatorium.

The King Edward VII Sanatorium for Consumption, probably the best equipped institution of its kind in the world, has just been completed, fifteen months after the laying of the foundation stone. It is situated at Midhurst, Sussex, on the South Downs, and has cost \$1,000,000. The architect, Mr Percy Adams worked in co-operation with Dr Latham in designing the institution and visited various continental sanatoria. The situation is an ideal one. The sanatorium is 600 feet above the level of the sea, which is twelve miles away. To the north it is sheltered by pine woods. The grounds exceed 160 acres and around the building have been laid out as terrace gardens. The rooms are so constructed as to collect all the light possible and to afford no lodgment for dust. There is accommodation for 100 patients. The corridors are protected half way up by spring doors at regular intervals, so as to allow of free ventilation but of no through draft. Each bedroom allows of 1,730 cubic feet of air per head. On each floor is a wide out side balcony facing the south for promenaders. All the walls have a sanitary surface which is like porcelain but is not so cold as glazed tiling would be.

The Metropolitan Asylums Board.

The Metropolitan Asylums Board is one of the most remarkable institutions of its kind in the world. It controls all the fever hospitals of London as well as other institutions. The scope of the work embraces an area of twenty one square miles and a population of 4,648,950. Among the institutions controlled by it are fifteen hospitals for infectious diseases, six lunatic asylums and a land ambulance service with eight stations and 171 ambulance vehicles, a river ambulance service possessing three wharfs and five steamboats, the training ship *Exmouth* with infirmary on shore, a "shipping home" with accommodations for 60 boys, six homes for defective children, three seaside children's and seven other homes for children. In all, the board is responsible for forty nine homes and hospitals. There are two recent additions—a home for convalescent fever patients and an asylum for imbeciles. The general expenditure for the year amounts to over \$5,000,000. Over 5,000 persons are employed on the staffs of the institutions and there are 7,000 inmates of the asylums and 8,000 patients at the hospitals.

The After-Care Association.

A useful institution exists in London, known as the "After-Care Association," the object of which is to help poor persons discharged from asylums for the insane. The annual meeting was held under the presidency of Sir Richard Douglas Powell. The report stated that the work of the association during the past year had been very encouraging. There were 288 cases before the council—176 women and 112 men. The number successfully helped was greater than in any previous year. The total receipts in 1905 were \$5,000. The object of the association the only one of its kind in the United Kingdom is to enable people who had been in asylums to take up a useful part in life. This is done

by grants in aid, by influencing the friends of the patients on their behalf, by providing cottage homes and by educating public opinion on a matter to which as yet little thought is given. The occupations open to these poor people are necessarily somewhat restricted, but they might be usefully engaged in horticultural and agricultural pursuits of a simple kind and in simple handicrafts.

The Medical Profession in 1906

The number of physicians on the Medical Registrar in 1906 is 38,921, an increase of 545 on the number of 1905. The number on the London list is 6,438, against 6,397 in 1905, the provincial list for England gives 16,976 against 10,718 in 1905. In the overcrowded state of the profession it is satisfactory that the rate of increase of the profession has been diminishing in recent years and, according to the most recent statistics, appears to be less than the increase of the population. The population of England and Wales, according to the census of 1901, was 32,527,843. In the middle of 1905 the estimated population was 34,152,977, an increase of a little over 5 per cent. The increase in the number of physicians in the same period was 921, a little under 4 per cent. In London the rate of increase is considerably less than the rest of England, amounting to 2.3 per cent.

Action for Injuries Due to Treatment by the X-Rays

A most interesting action has been tried in the courts for damages due to alleged negligent treatment with the x-rays. The defendants were a firm of chemists who were in the habit of administering the x-rays. The plaintiff was a solicitor's clerk who was suffering from locomotor ataxia and was gradually losing power in his legs. The use of the x-rays was advised by a physician, who sent the patient to these chemists, who were in the habit of administering the x-rays for him. The plaintiff alleged that his feet were placed so close to the bulb that it touched the soles and that they were deeply burned. For the defense expert evidence was given showing that it was impossible for the plaintiff to have received the injuries alleged. There were no burns on the abdomen or other parts of the body to which the rays were applied.

Identification by Teeth.

A remarkable case of identification by teeth has just occurred. Two colliers were charged with breaking into a store and stealing. It was found that some one had bitten a piece off the side of a cheese and left the marks of his teeth. Suspicion falling on the two men they were arrested, and one of them unwillingly allowed a cast of his mouth to be made, which was found exactly to fit the marks on the cheese. Expert evidence was given by a dentist, who stated that no two sets of teeth are identical. The prisoner showed much anxiety that his mouth should be examined to see if his teeth would fit the impression on the cheese, and when this was done it was found that since his arrest he had knocked out a stump. He was found guilty.

The Death Rate.

The quarterly return of the registrar general shows that the death rate in England and Wales during 1905 fell to 15.2 per 1,000, which was lower than in any previous year since the civil registration was established nearly seventy years ago. The death rate has been below 17 per 1,000 in each year of the present century, and during the quinquennium, 1901-5, the mean annual death rate has been but 16 per 1,000—a decrease of 1.7 on the rates of the preceding quinquennial periods. Since the period 1861-5 there has been a steady decline of the death rate from 22.4 to 17.7 in 1896-1900.

Death Under Chlorid of Ethyl in a Dentist's Chair

The dangers of the recently introduced general anesthetic chlorid of ethyl are illustrated by the following case. A clergyman, aged 67, went to a dentist to have four teeth extracted. Chlorid of ethyl was administered to him by a physician, the brother of the dentist. An average quantity of the anesthetic (5 c.c.) is said to have been given, but whether or not exclusion of air was practiced is not stated in the report. When the fourth tooth was drawn the patient became very pale and died almost immediately.

New Departure in the Prevention and Treatment of Tuberculosis.

At the Brompton Hospital for Consumption, a scheme is about to be introduced by which the benefits and educative influence can be extended to others than those who apply for treatment. It is proposed to get in touch with all the housemates of any phthisical patient who presents himself, ascertain their condition, treat them if necessary, and in any

case arrange that they are taught to keep themselves free from infection

The Birmingham Anti-Corset League

Birmingham possesses a society which is devoted to persuading women that they are seriously injuring themselves by wearing corsets. The members of the society are enthusiastic and demonstrate their views whenever possible. In a little over two years they have increased their numbers to 90, two thirds of whom are women. They claim that there is an increasing demand for reformed dress outfits.

Epidemic of Cerebrospinal Meningitis

Surgeon General Ihm has issued a report to the local government board for Ireland on a localized epidemic of cerebrospinal meningitis which occurred in Innishannon Island and in the Cloggan district of Ireland, neighboring areas separated by ten miles of sea. The origin of the epidemic could not be traced. No cases of epidemic meningitis have been reported in Ireland since 1900.

Pharmacology

Report of the Council on Pharmacy and Chemistry

The following report was presented to the Board of Trustees of the American Medical Association at its meeting held Feb 23 1906

To the Board of Trustees of the American Medical Association Gentlemen—We beg to make the following report

A conference of the Council on Pharmacy and Chemistry was held at Cleveland, Sept 11-12, 1905, to which certain manufacturing pharmaceutical and chemical houses were invited to send representatives, as the Council desired suggestions and criticisms regarding the general plan of the work. Several physicians were also invited. The rules were thoroughly considered and finally adopted in the revised form as follows

(The term "article" shall mean any drug, chemical or similar preparation used in the treatment of disease)

RULE 1—No article will be admitted unless its active medicinal ingredients and the amounts of such ingredients in a given quantity of the article be furnished for publication. The general composition of the vehicle, its alcoholic percentage, if any, and the identity of other preservatives if present must be furnished.

RULE 2—No chemical compound will be admitted unless sufficient information be furnished regarding tests for identity, purity and strength, the rational formula or the structural formula, if known.

RULE 3—No article that is advertised to the public will be admitted, but this rule will not apply to disinfectants and food preparations except when advertised in an objectionable manner.

RULE 4—No article will be admitted whose label, package or circular accompanying the package contains the names of diseases, in the treatment of which the article is indicated. The therapeutic indications, properties and doses may be stated. (This rule does not apply to literature distributed solely to physicians, to advertising in medical journals, or to vaccines and antitoxins.)

RULE 5—No article will be admitted or retained concerning which the manufacturer, or his agents, make false or misleading statements as to geographical source, raw material from which made or method of collection or preparation.

RULE 6—No article will be admitted or retained of which the manufacturer or his agents make unwarranted, exaggerated or misleading statements as to therapeutic value.

RULE 7—Labels on articles containing "poisonous" or "potent" substances must show the amounts of each of such ingredients in a given quantity of the product. A list of such substances will be prepared.

RULE 8—If the trade name of an article is not sufficiently descriptive of its chemical composition or pharmaceutical character, or is, for any other reason, objectionable, the Council reserves the right to include with the trade name a descriptive title in the book. Articles bearing objectionably suggestive names will be refused consideration.

RULE 9—If the name of an article is registered, or the label copyrighted, the date of registration and a copy of the protected label should be furnished the Council. In case of registration in foreign countries the name under which the article is registered should be supplied.

RULE 10—If the article is patented—either process or product—the number and date of such patent or patents should be furnished.

The proposed book, "New and Non Official Remedies," was also discussed, and it was tentatively agreed that it should be divided into two parts. Part I to consist of definite chemical compounds and simple pharmaceutical preparations, and Part II to comprise pharmaceutical mixtures. The plan of procedure referred to in the previous report was slightly elaborated. Since the conference the Council has considered the merits of various proprietary articles and has provisionally arranged and classified a large number of preparations which are considered worthy of recognition.

As indicated in the first report, the consideration of pharmaceutical mixtures—the vast majority of preparations belong to this class—proved a most difficult problem. Such a preparation is usually an ordinary mixture, made according to some physician's prescription, or after some well known formula, modified in some way to disguise its identity, which has been placed on the market as a new preparation under a catchy or suggestive name, accompanied with extravagant therapeutic claims. Such preparations represent nothing new and involve no unusual skill in their manufacture. Their use is to be deplored, but if they are to be used a complete statement regarding their composition should be furnished to physicians. If this were done, and if all mystery regarding them were removed, their use would be very limited. It has been decided, however, that as many of these mixtures as conform to the rules will be placed in Part II of the proposed Annual, where, when similar, they will be grouped together and explicit reference be made to corresponding official preparations.

In this connection, however, it should be borne in mind that standard preparations, such as those in the Pharmacopoeia and in the National Formulary—fully equal, if not superior, to the proprietary mixtures—are not only listed in the catalogues of the manufacturing pharmacists and chemists, but are also easily compounded by any experienced retail pharmacist.

While the Council is acting solely for the medical profession it has remembered that there is no antagonism between legitimate pharmacy and medicine, that there is a mutual dependence, and that, consequently, there should be a mutual cooperation between the Council and legitimate pharmacists and chemists. While most of the well known firms have been co-operating with the Council, some seem to hesitate about doing so. The Council believes, however, that this hesitation comes from the fact that these firms have not fully appreciated the objects for which it is working, and which are believed to be as much in the interest of scientific pharmacy as in the interest of scientific medicine, and therefore, in the interest of all honest and legitimate manufacturers. The Council has endeavored to make it plain and convincing to manufacturers that in the present movement there is no intention to interfere with the proper exploitation of their products, and that it does not expect them to reveal the technical secrets involved in their processes of manufacture, but that it must insist that a truthful statement concerning the actual composition, or the medicinally active components, both as regards quantity and quality, must be given, together with tests for the identification and confirmation of such medicinal constituents.

Certainly as much to be deprecated, and more harmful in their effects than secrecy in composition, are the false and absurdly extravagant claims made by some of the otherwise reputable vendors of proprietary medicines. These claims equal and occasionally surpass the claims made by "patent medicine" vendors in their advertisements in the newspapers. During the last few years this method of advertising has grown steadily worse, each advertiser apparently wishing to outdo every other in eulogizing his particular preparation. It has finally come to pass that a plain, truthful statement regarding the therapeutic value of an article is generally considered valueless, and even reputable firms have not hesitated to make statements in their advertising literature that have been far from the truth. Many manufacturers acknowledge this and excuse themselves by saying that others have done it and they had to. They acknowledge that loose methods regarding this feature of their business have been in vogue, largely due to unchecked competition by unscrupulous concerns. We presume there is no objection to a reasonable optimism on the part of the manufacturer, but obvious misrepresentations as to the therapeutic value are quite as dishonest as misstatements concerning the composition.

Another difficulty which the Council has experienced in its investigations of synthetics, mixtures and new remedies is found in the character of the names proposed therefor. It is a recognized principle that the name proposed for a remedy should not in any way mislead or deceive. If the name, therefore is indicative of origin, the origin indicated

must be the real one. If, on the other hand, it is indicative of quality or property, the preparation must have that quality or property. Names which, by their ending or otherwise, are indicative of definite classes of compounds, or which in any part of the name show derivation from any particular source or the possession of any particular quality, must be true to the indication. Many preparations would be excluded from classification by reason of false or misleading names.

Investigation has shown that, as a rule, the preparations placed on the market by the regular manufacturing pharmaceutical and chemical houses are as represented, at the same time we regret to state that in some instances otherwise reputable firms have been offering to the profession articles that are not in accord with the claims made for them. The Council does not think it wise to be more specific at this time, believing that these preparations will be withdrawn, or that a true statement will be made regarding their character and composition.

Investigation has also shown that certain remedies are being manufactured under patents that do not conform to the specifications of the patents.

Attention is called to the fact that occasional statements respecting the nature of the substances occurring in the mixture or methods of preparation are made by manufacturers which seem to be contrary to the established principles of chemical reactions. As an illustration of this, it may be stated that the mere mixture of two substances, which may possibly react chemically, is not properly represented by supposing that complete chemical reaction has taken place unless that actually has occurred. This is especially true of certain very complex organic compounds, which, it appears, can not possibly be made by the preparation either of the pure acids or of the pure bases, but in which attempts are made to produce the combination by mixing the substances in the crude or unmanufactured state and assuming that the chemical reactions have taken place.

In these cases the statement of the manufacturer should convey the facts of the case and not the assumed reactions.

As was mentioned in the former report, an investigation of some of the so called cod liver oil preparations has led the Council to believe that some of these articles are fraudulent since they contain no cod liver oil, and that both the public and the medical profession are being greatly deceived in many articles that are placed on the market as tasteless or fat free cod liver oil.

These are the features of existing conditions that are retarding the work and delaying the approval for admission of some articles which otherwise might be accepted.

The Council recognizes that sufficient time should be allowed manufacturers to make the necessary changes in their labels, circulars and printed matter to conform to the rules. July 1, 1906 has been tentatively fixed as the date when compliance with the rules be required of all preparations. It is hoped that soon after that date it will be possible to issue the first edition of the proposed book, "New and Non Official Remedies." Although the first number will not be complete, the annual revision will afford opportunity for the admission of such articles as may not at that time have been acted on.

It is hardly necessary to remind you that there is much detail work of a chemical nature connected with this work, and while some of the members of the Council have been devoting much time and labor in this direction it is believed that some of this detail work could be done much more satisfactorily if facilities for it were provided by you at the Association building. Therefore, the Council begs to suggest that if it is possible to do so, a chemical laboratory be established by the Association with a competent chemist in charge. There is a great amount of work to be done, and it is work that must be continued if the medical profession in the future desires to protect itself from unscrupulous promoters.

The Council reiterates its former plea to those connected with hospitals for their co-operation in making clinical tests. There has been some co-operation of this nature, but not so much as the Council wishes it could have.

The prospects for a satisfactory solution of the various questions which confronted the Council at the beginning are

more favorable as time goes on, it wishes to state, however, that the ultimate success of the work must necessarily depend largely on its endorsement by the members of the American Medical Association and by the physicians in general limiting their support to those manufacturers who are supplying them with honest preparations in a legitimate manner.

The evident appreciation of the efforts of the Council by the medical profession of the country is highly gratifying and encouraging.

Respectfully submitted,

C LEWIS DIFRL,
C S N HALLBERG,
ROBERT A HATCHER,
L F KEBLER,
I H LONG,
T G NOVY,
W A PUCKNER

SAMUEL P SADTLER,
J O SCHLOTTERBECK,
GEORGE H SIMMONS,
TORALD SOLLMANN,
M I WILBERT,
H W WILEY,
JULIUS STIEGLITZ,

Members of the Council on Pharmacy and Chemistry, American Medical Association

Amenoretts

DODGE CITY, KAN., March 9, 1906

To the Editor —As a slight contribution to the fight against nostrums, permit me to relate a recent experience with a detail man for a proprietary preparation made at Topeka, Kan. This man entered my office and introduced himself as the representative of "The Amenorett Company," and laid on my desk a small box containing a number of vaginal suppositories.

He informed me, with zealous kindness, that the suppositories would cure all "female complaints" and save many a woman from the butchery of the surgeon's knife. He helped himself to a chair and sat down to tell me of the wonderful results achieved by his remedy.

I always listen to these men whenever I have the time, and in this case I heard the familiar tale of restored health after all other means had failed.

He had given me a circular, and this is what I read:

"Amenoretts The Great Cure for All Female Trouble." "Amenorrhoea, leucorrhoea displacements, ulcerations of the womb, pelvic cellulitis, peritonitis, abscess tumors, sterility, ovarian dropsy, menopause and piles.

"For amenorrhoea, leucorrhoea, irregular or suppressed menstruation and neuralgia of the womb, use every other night.

"For enlargement and falling of the womb, use every night for three nights, thereafter every other night until cured.

"Ulceration and catarrh of the womb, use every other night.

"Pregnancy period, use once or twice a week after second month.

"Change of life period, twice a week.

"To correct non development of young women, use three times a week.

"Gonorrhoea, use every night for ten nights or until there is a feeling of lassitude indicating overuse of the remedy.

"Piles insert one in the rectum every other night, pushing it well up," and so on.

I asked him what the Amenoretts were made of and he referred me to the circular. And here is what I read:

"FORMULA OF THE SUPPOSITORY"

"The active principles of Pyrolingenuous Acid, Iodine Picric Acid, Boracic Acid Quinine, Tetraborate of Soda, Glycerine and Oil of Theobroma."

"TABLETS"

"Pyrolingenuous Acid, Iodine, Boracic Acid, and Tetraborate of Soda."

I said "There is no active principle of pyroligneous acid [wood vinegar], iodine, picric acid or boracic acid. Quinine is itself an active principle of cinchona, while the active principles of sodium tetraborate [borax], and glycerin must have their abiding place in the vivid imagination of the writer of this very remarkable formula. But laying aside these non essentials, I don't see any quantities specified."

"No," said my visitor, "we don't print quantities."

"Why not?"

He smiled at my evident innocence. "Because," he replied "you'd take the formula across the street to your

local druggist and we wouldn't get to sell you any of our suppositories. Understand,' he continued, "we don't sell these to the lady. We're strictly ethical."

I ignored his last remark, it contained food for reflection, and said "I certainly shall not buy of you unless I know not only what substances are incorporated in the suppository, but how much of each substance. And I think too much of my patients to experiment on them with such a product. Are you a physician?"

He said that he was not.

"Well if you were a physician, how do you suppose that you would feel if a man, not a doctor, should come into your office and volunteer advice with regard to the treatment of your patients with something he had to sell, the composition of which he refused to disclose?"

Not being a physician, he didn't know how he would feel under such circumstances. I asked him if he had any difficulty in getting rid of his samples. He said that there was not much, that occasionally a doctor declined them, but that did not often occur. He had recently sampled Kansas City, spending two weeks there and during the following month he received orders for \$200 worth of the goods. And I am afraid that he told the truth.

What right has medicine to be called a learned profession when its votaries, in the use of remedies of unknown composition, exhibit a credulity that puts them on a level with the aboriginal medicine man, and far below that of the Christian scientist? W H GRAVES, MD

Petition in Germany for Central Government Office to Examine New Remedies

A petition has been presented to the secretary of state for the German empire asking the establishment of a central bureau whose office shall be to examine the new "patent" and proprietary medicines and apparatus put on the market for the cure of disease. The petition was signed by a large number of German physicians, manufacturing chemists, and others. The aim of the central bureau would be something like that of the Council on Pharmacy and Chemistry of the American Medical Association, except that it would be an official institution of the government. The petition cites the present abuses and the scandal of having nostrums and fake apparatus protected by government patents. It also describes with approval the work done by the mayor of Karlsruhe, who, on his own initiative, has had all the remedies which are advertised in the local papers, bill boards, or elsewhere, analyzed, and the reports published to warn the public of the danger of being swindled. The petition also refers to the way in which manufacturers continue a preparation under another name when its has been exposed. The petition owes its inception to the German Antiquackery Society.

"Patent Medicine" and the Lumberjack

A writer in the *State Review*, published in Grand Rapids, Mich., in the issue of March 3, 1906, comments on the government's action in forcing those who retail certain alcoholic nostrums largely used for liquor to take out a liquor dealer's license, and says that this new policy on the part of the internal revenue service will affect the Michigan lumberjack in particular.

The writer says:

"In nearly all the small lumbering towns in the upper peninsula, and in the cordwood camps conducted in connection with the woods operations of the furnace companies, patent medicines of every kind are sold in immense quantities. The 'medicines' are not purchased by the thirsty individual for the purpose of alleviating physical disorder, but rather with the idea of satiating an unquenchable thirst for 'something strong.' In the cordwood camps of Alger County, where Finns and Scandinavians are employed, the most favored patent medicine is known as Hoffman's Drops, a mixture in which ether and other chemicals predominate, and produce the desired result of a stimulant much more quickly than Peruna or the average brand of stomach bitters. The 'Drops' are used almost to the exclusion of all other patent medicines, and are purchased by dealers in case lots, being as staple a commodity as flour and sugar, with the additional feature of yielding a larger profit to the dealer.

"It is not an uncommon sight in stores located near lumber or woodchoppers' camps to find from ten to fifty cases of Peruna or other patent medicine bitters piled up in the store room. In some localities Hostetter's Stomach Bitters, Rock candy Cough Cure or other brands are preferred, but in most instances Peruna is the general favorite with the lumberjack, and is bought more eagerly than any other. In a single car load of 'local' freight taken out of Marquette recently on a certain railroad were 150 cases of Peruna consigned to general stores at stations east of here. This single shipment was unusual, of course, coming as it did in one day, but it is given as an illustration of the amount of this 'medicine' consumed in the lumber camps for other than medicinal purposes in the immediate vicinity of Marquette. In the absence of liquor the men are willing to accept any kind of medicine that will have the desired stimulative effect. Not all the men in lumber camps, however, are addicted to the habit of bitters tipping, but the majority of them will take almost any kind of nostrum when liquor is not obtainable."

Working the Doctor

LA JUNTA, COLO., March 7, 1906

To the Editor—Some time ago I received from the Resinol Company, of Baltimore, a sample of their soap. Accompanying the sample was a postal addressed to their home office, soliciting the names of a few of my patients who were likely to be interested in resinol soap. Suspecting that this meant open advertising of the resinol ointment to the public, using our profession for the purpose, I sent the firm the addresses of four of my patients, telling my patients what I had done and asking them to let me see what was sent to them. In a few days all received samples of resinol soap, which, of course, it was perfectly proper for the firm to send, but mark the sly way of advertising resinol ointment direct to the public, using me as their unpaid agent for the purpose. I enclose two circulars. One refers to the soap and, while extravagant claims are made for the soap, there is nothing otherwise objectionable in the circular. The second circular, however, is a different proposition. This circular calls special attention to resinol ointment and contains testimonials from thirteen physicians and one dentist. How a layman can read this circular and these testimonials without being convinced that resinol ointment is the greatest thing on earth for about everything that could happen I do not know. Judging by the circular it certainly has the indorsement of the medical profession, and the layman is told by physicians that it is good for erysipelas, all kinds of local inflammation, such as burns, boils, mammary abscesses, eczema of all kinds, herpes zoster, pruritus ani, pruritus vulvæ, hemorrhoids, scald head, cold sores, red and inflamed nose (although we are told in parentheses that it will not apply in this regard to the red nose caused by alcoholism), fetor of feet or offensive perspiration, or any morbid exudation.

I realize that this particular instance is only one of thousands that are going on all the time. Physicians are "worked" for a testimonial, and after they have given the testimonial they are then "worked" to distribute them to the public so that the public can buy the stuff direct, for why should they go to a doctor when all doctors apparently say that resinol ointment will cure all skin diseases, besides several other things.

Is it not about time that we physicians realized how we are being humbugged and utilized by these proprietary men?

E GARD EDWARDS

Some More Endorsements

Dr Oscar F Mayer, City of Mexico, writes

"My congratulations to the good work of the Council on Pharmacy and Chemistry, which is appreciated by an old Ph G."

Dr B E Miller, Albion, Ind., writes

"I like that reform movement dealing with drugs, and feel deeply interested in the reports."

Dr S H Landrum, Whitewright, Texas, writes

"I am enthusiastic for clean pages and scientific text."

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION gets better every year. Its absolute independence is its great advantage."

MARCH 24, 1906

Dr C. L. Upton, Shelburne Falls, Mass., writes

"I commend most heartily the good work THE JOURNAL is doing in the exposure of the 'patent medicine' fraud and the equally bad or even worse proprietaries. I have stopped my subscription for several journals because of the advertising they carry. If all the members of our profession would make their protests in this way we would soon correct the evil so far as the medical journals are concerned.

"I wish to add a few words about Chamberlain's Colic, Cholera and Diarrhea Remedy. Two weeks ago I was consulted by a railroad telegrapher who had been taking his medicine for the past two years. He began it for a diarrhea and has become addicted to it. He now takes from two to four ounces nightly (he is a night man), and has become a complete nervous wreck. This case needs no comment of mine, it speaks for itself. Let the good work go on."

Dr T. E. Keeler, Lebanon, Ohio, writes

"Your crusade against 'patent' and proprietary medicines is doing great good. Publicity is what is needed."

ACTION BY MEDICAL SOCIETIES

At a meeting of the Kaufman County (Texas) Medical Society, held February 6 resolutions were adopted indorsing the action of the American Medical Association in establishing the Council on Pharmacy and Chemistry, and commending the educational campaign being carried on by the *Ladies' Home Journal* and *Collier's Weekly* in exposing the subversiveness of the press to the Proprietary Association of America and the methods of this organization in exploiting remedies. The resolutions also condemned the prescribing of preparations of unknown composition.

At a meeting of the Bucks County (Pa.) Medical Society, held February 14, resolutions were adopted indorsing the stand that has been taken against nostrums and "patent medicines" by THE JOURNAL of the American Medical Association, *Collier's Weekly*, the *Ladies' Home Journal*, the *Druggist's Circular*, the *Farm Journal* and other publications, and approving the work of the Council on Pharmacy and Chemistry in exposing the nature of many much lauded preparations, and recommending physicians to refrain from prescribing these remedies and from subscribing for or contributing to any medical publication under the control of nostrum manufacturers and vendors. The society also approved the bill to regulate the manufacture and sale of proprietary remedies drafted by the *Ladies' Home Journal* and suggested that a national commission be created to investigate remedies and to pass judgment on their therapeutic value.

Similar resolutions were passed by the Rhode Island Medical Society, and the Lenawee County (Mich.) Medical Society.

At a meeting held February 21 the New Haven Medical Association decided to appoint a chemist to analyze secret and "patent medicines," provided it can be done without expense to the association.

At a meeting of the Madison County (Texas) Medical Society, held March 13 the following resolutions were adopted:

WHEREAS, The American Medical Association, through its Committee on Pharmacy and Chemistry, is making a heroic and much needed war in defense of the decency and dignity of American medicine for the benefit of the people of the United States against the corrupt, unscrupulous, avaricious and shameless system of nostrum prescribing, advertising and selling. Therefore be it

Resolved That the Madison County Medical Society heartily approves the work already accomplished by said Committee on Pharmacy and Chemistry and hopes for a continuance of same.

Resolved That it condemns the slovenly, ignominious, unscientific and fraudulent practice of prescribing and advertising secret remedies of any kind, whether designed for the use of physicians or the public.

Resolved That the bill republished in the March (1906) number of the *Texas State Journal of Medicine* under the caption "Mr. Bok's Patent Medicine Bill" meets with the approval of the society.

Resolved That the delegates to the next meeting of the Texas State Medical Association are hereby instructed to have these resolutions read to that body and to ask for proper consideration.

At a meeting of the Evanston Branch of the Chicago Medical Society resolutions were adopted endorsing the work of the Council on Pharmacy and Chemistry of the American Medical Association, and urging that the present campaign of publicity be continued unremittingly. The society also urged members to refuse to sanction in any way the use of any remedy the formula of which is not definitely known, and recommending the careful investigation of the methods of false advertising carried on by so called medical specialists whereby the public is defrauded, and recommended that in this case also a campaign of publicity be inaugurated.

Medical Legislation

Governmental Department of Health.

Dr M. W. Gray, Secretary of the Oakland County (Mich.) Medical Society, informs us that at a regular meeting of the society at Pontiac, March 13, 1906, the following resolution was passed:

WHEREAS The public health problems of this country are of strictly fundamental importance and underlie success in agriculture, manufactures, commerce and every other branch of human activity as was shown in Cuba where successful military operations depended on the work of the sanitary corps as was shown in New Orleans where the commerce of a city and of a great section of the country was paralyzed pending the suppression of an epidemic and is being exemplified by the brilliant achievements of Colonel Gorgas in the Isthmus of Panama where the gigantic operations of engineering stand at rest until successful sanitation makes their prosecution possible. Therefore, be it,

Resolved That it is the sense of the Oakland County Medical Society that a department of health with representation in the Cabinet of the President ought to be established such a department to embrace an expansion of the present Public Health and Marine-Hospital Service with the addition of other public health agencies now existing and in operation in other departments of the government, together with such other agencies and functions as may best subserve the public welfare.

The Vermillion County (Illinois) Medical Society, at its meeting at Danville March 12, with a membership of seventy-one representative physicians, voted unanimously in favor of the creation of "A Department of Public Health with Representation in the Cabinet."

The Society also voted unanimously in favor of all the subjects recently referred to the auxiliary committee, with the exception of "The Bill to Restore the Canteen in the Army," which received a unanimous opposition vote.

Bills in New Jersey Legislature

During the present session of the legislature of the state of New Jersey a number of bills have been introduced which are of interest to the medical profession. One provides for a laboratory for the manufacture of diphtheria antitoxin and for its free distribution through local boards of health. Provision is also made for the appointment of sanitary inspectors, health officers and statisticians for the bureau of vital statistics. An appropriation of \$20,000 annually is asked for to insure the securing of pure foods, drugs, medicines, etc.

The most important bill is one providing for the regulation of the sale of drugs and for the inspection, analysis and regulation of their manufacture. We quote section one in full: "No person shall manufacture, sell or offer or expose for sale or give away any proprietary medicine or other medicinal preparation containing alcohol, opium or any of its preparations, its alkaloids or their derivatives, nuxvomica and its alkaloids and their derivatives, digitalis, chloroform, cannabis indica, chloral or any of its derivatives, bromids, cocaine or any of its salts, eucain or any of its salts, acetanilid, antipyrin, bromoform, exalgin, holocain, phenacetin, phenocoll, sulphonal, trional, veronal or any other hypnotic, anesthetic, analgesic or cardiac, circulatory, respiratory or nerve depressant unless the same shall have plainly and conspicuously stamped or printed on the bottle, box or receptacle containing the same, or on the label affixed thereto, and also on the outside wrapper or package, if any, and also in the inside wrapper and on all circulars accompanying said medicine or medicinal preparation and relating to it, if any, a true statement of the percentage of alcohol and the percentage or proportion of each of the other above mentioned or described drugs contained in each bottle, box, receptacle or package of such medicine or medicinal preparation."

ration. Such information shall be stamped or printed in antique or gothic type, easily to be read, of a size not smaller than that known as ten point, and so displayed as to be conspicuous. Where alcohol is used as a solvent, vehicle or preservative, or for any other purpose, it is to be deemed as contained in the medicine or medicinal preparation within the meaning of this act, and the drugs above mentioned or specified shall be described by their common or English names."

The term medicinal preparation as used in the bill is intended to include every preparation or combination or mixture of drugs, or of drugs with substances which are not drugs, when such preparation is said to have medicinal properties or to be a remedy or medicine or cure or food, or is intended to be used for medicinal purposes. The act does not apply to preparations intended solely for external use.

The Patent-Medicine Bill in New York

AN INTERESTING HEARING

The senate and assembly committees on public health held a public hearing jointly on the Stevens Wainwright Proprietary Medicine Bill (Senate No. 278, Assembly No. 150), in the capitol at Albany, N. Y., March 11.

This bill provides that proprietary medicines which contain alcohol, opium or any of its preparations, its alkaloids or their derivatives, strychnin, digitalis, chloroform, cannabis indica, chloral or any of its derivatives, bromids, cocain or any of its salts, eucain or any of its salts, acetanilid, antipyrin, bromoform, exalgin, holocain, phenacetin, phenocoll, sulphonal, trional, veronal or any other hypnotic anesthetic, analgesic or cardiac, circulatory, respiratory or nerve depressant, shall be so labeled as to reveal the presence and percentage of those ingredients.

Only seven persons appeared in opposition to the bill, viz., George L. Douglass, attorney for the Proprietary Association, Mr. Muir and Mr. Rogers, for the New York State Pharmaceutical Association, Mr. A. C. Searles, Mr. Peter Diamond and Mr. George Lennau, retail druggists. In behalf of the drug section of the New York City board of trade, Mr. Peters offered a substitute bill, of entirely different scope, viz., a bill to prohibit the sale of cocain, eucain, opium, morphin, heroin, chloral hydrate or any salt or compound of any of the foregoing substances, or any preparation or compound containing any of them, except on physician's prescription.

Two of the objections made to the Stevens Wainwright bill had already been foreseen by the committee for safeguarding the sale of narcotics, under whose auspices the bill was introduced, and amendments had already been prepared to cover the objections, viz. (1) that to guard against injustice arising from the possibility of errors in analysis, the results of analyses should not be published by the State Department of Health until after thirty days' notice to the manufacturer. (2) The other objection was against the general descriptive words intended to cover new variations of coal-tar derivatives. The proposed amendment is to strike out those words and insert a provision authorizing the State Board of Health to add to the drugs enumerated in the bill, from time to time, as it may deem necessary for the protection of the public health. This is in accordance with the powers already conferred by statute on the State Department of Health with reference to additions to the poison list.

Mr. Douglas, for the Proprietary Association, argued that the bill meant "destruction, not regulation." He received his answer later, that such an assertion was tantamount to an admission that many of the preparations on the market which he was employed to defend were of such a nature that the public would refuse to buy them if it knew their contents.

He argued that the bill discriminated between proprietary preparations and medicines listed in the Pharmacopeia, that a Pharmacopeia preparation might contain 90 per cent alcohol and be sold without labeling, while proprietary medicines which contained a small amount of alcohol, for example, 5 per cent, would come under the law. The obvious answer was made that the object of the bill was publicity. The ingredients of Pharmacopeia preparations are known and they are properly excepted from the operation of the bill, as there is no desire to interfere with legitimate drug business.

Mr. Douglas argued that the bill was intended to prejudice the public mind against proprietary medicines, that alcohol was necessary as a solvent and to prevent freezing and precipitation. That proposition was met by a statement that the bill does not prohibit the use of alcohol nor attempt to limit its use or to condemn or in any wise criticize the use of alcohol, but simply provides that its presence shall be made known.

Mr. Douglas laid great emphasis on the fact that the users of proprietary medicines were not there advocating the bill, but Mr. William A. Jenner disposed of this argument effectively by reminding the committee that the users of those remedies were ignorant of their contents, and that while they were not there asking for legislation, neither were they present to oppose it.

A. A. Seymour, secretary of the State Department of Health, said he represented the commissioner of health. He advocated the bill. Said the department desired it and would enforce it.

The importance of the subject was well attested by the presence of so many distinguished men in favor of the bill, as follows: Mr. William A. Jenner, Dr. A. Jacobi, Dr. W. Gilman Thompson, Dr. Egbert Le Fevre, Dr. Arthur T. Root (representing the New York State Medical Society), Dr. Wisner R. Townsend, Dr. Albert Weston, Dr. Arthur T. Holding (Albany County Medical Society), William Jay Schieffelin, Ph.D. (of Schieffelin & Co., manufacturing druggists), Samuel Hopkins Adams (of *Collier's Weekly*), Rev. Hervey Wood (representing National Temperance Society and delegated to represent all the Baptist organizations in the state), Mrs. Frances W. Graham (president New York State Woman's Christian Temperance Union, representing nearly 900 unions and about 20,000 members in the state), Rev. John M. Trout (delegated to represent all the churches of the Westchester presbytery), Homer Folks (delegated to represent the State Charity Organization Society), Edward T. Devine (delegated to represent the Charity Organization Society), Seth B. Robinson, Alfred L. Manierre.

Correspondence

Poison Ivy

BUFFALO, N. Y., March 17, 1906

To the Editor.—Referring to the discussion in regard to *Rhus toxicodendron* and *Rhus venanata* in your issues of January 27 and March 17, and intervening issues, I would like to make some observations and to ask some questions. I seem to be immune. When a little boy, spending the summer vacations on a farm, I repeatedly tried to poison myself by walking through patches of ivy barefoot, and even rubbing it into the skin and into abraded places, but failed in a number of trials in several summers. My object was to exchange the hygienic advantages and loneliness of the country for the more familiar disadvantages of the city. For a number of years afterward I did not hesitate to handle the plant freely, and was never poisoned. Since arriving at years of relative discretion I have avoided the plant as a matter of ordinary caution, but have not hesitated to walk through it, and have often touched it accidentally without harm.

In several summers' experience as physician at a boys' camp I never encountered a marked case of poisoning, although I have seen it produce urticaria-like wheals that promptly disappeared after washing with plain water. As a matter of precaution the boys were assembled at the beginning of each encampment and warned against the two poisonous rhoeas, *Solanum dulcamara*, etc. Many cases of poisoning are due to confusion with Virginia creeper, *Ampelopsis quinquefolia*. A good way to impress the difference on children is to tell them that they can safely shake hands with the plant that has five leaflets, corresponding to their five fingers, but not with the three leaved plant.

I have known of bad cases of poisoning due to the use of *Rhus toxicodendron* in place of toilet paper, and one of my friends was terribly poisoned in winter by a homeopathic physician who ordered the tincture in a liniment for some form of rheumatism.

Can anyone state from actual experience whether poisoning occurs from conveyance by wind, and whether dermatitis tends to occur a year later without fresh exposure? Both of these claims seem absurd, and yet I am credulous enough to accept any statement, however absurd, if it can actually be proved—and some things that have seemed absolutely absurd have been proved.

A. L. BENEDICT, M.D.

CINCINNATI, OHIO, March 16, 1906

To the Editor—In the current issue of THE JOURNAL A. W. Balch, Washington, passed assistant surgeon, United States Navy, takes exception to my article on "Dermatitis Venenata," abstracted in THE JOURNAL. He says that while I have had *Rhus toxicodendron* poisoning twice he has had it eighty times. He queries "Is it possible that the work of Pfaff is not yet known to the profession?" Had he read the original of my article, not the abstract, he would have seen full reference to Pfaff and his work. I should be pleased to read Dr Balch's experiences with his eighty cases of poisoning from *Rhus toxicodendron* more fully written up.

E. S. MCKEE, M.D.

Quinin in Pneumonia

NEW RICHMOND, OHIO, March 16, 1906

To the Editor—In 1874 I read, at a meeting of the American Medical Society in Cincinnati, my translation of an article from "Volkmann's klinische Vorträge," written by Jurgenson in 1872, in which he advocates the use of large doses of quinin in the treatment of pneumonia in conjunction with cold water baths. He gave from 25 to 40 grains at one dose, or if this was not advisable owing to an idiosyncrasy of the patient, he divided the dose in three or four equal portions, giving each at intervals of fifteen or twenty minutes, but so that the entire quantity was taken within an hour, or the reduction of temperature would not take place. I followed out this quinin treatment for two years, but found that it did not influence the course of pneumonia either favorably or otherwise, and it was often followed by such unpleasant symptoms of cinchonism that I desisted, and have not used the method since.

R. F. ERDMAN, M.D.

Staining of Conjunctiva by Argyrol.

DOVER, N. H., Feb 28, 1906

To the Editor—In a pamphlet sent out by the manufacturers of Argyrol I find the following statement: "Argyrol is the only silver salt that does not permanently stain the conjunctiva. It may be used with safety by patients themselves, as often as required."

Last week a patient appeared in my office who had been using a 10 per cent. solution of Argyrol in the left eye for nearly a year. It was originally prescribed by a competent oculist, but, of course, with the intention that it should only be used for a short time. I took pains to hunt up the original prescription to be sure that it was Argyrol.

In this case the bulbar conjunctiva, the caruncle, and the lining of the lid were as badly stained as from the prolonged use of a solution of nitrate of silver.

LOUIS W. FLANDERS

The Pure-Food Bill Board of Experts.

ANN ARBOR, MICH., March 18, 1906

To the Editor—Your editorial stricture on the provision in the amendment to Section 9 of the Hepburn bill providing for the appointment of a board of experts to pass on the wholesomeness or unwholesomeness of preservatives would be just if it were true, but you were laboring under a misapprehension when you made your editorial statement. You say that the decision of the board is final and that there is no appeal to the courts or to the Secretary of Agriculture. This is all wrong. The board of experts is selected by the Secretary of Agriculture, and he is instructed by the law to appoint disinterested men, the Secretary fixes the compensation allowed members of the board and he may accept or reject their findings. The Secretary of Agriculture, and he alone, is given the authority to render decisions, and even his decisions are of no further value than for "the guidance of officers."

with the administration of food laws and for the information of courts." The statement that no appeal from the findings of the board can be made in the courts is too puerile to deceive anybody. In this country, no one, not even a food manufacturer, can be convicted without a trial, and Section 6 of the Hepburn bill makes it plain that before any preservative can be condemned it must be shown by the prosecutor that it is poisonous or deleterious to health, and in such a trial the prosecutor and the defendant both have the right to bring forth whatever evidence each is able to produce. The findings of the board of experts as provided for in the amendment to Section 9 in such a trial may benefit either the prosecutor or the defendant, and either certainly would have the right to support or to combat the findings of such a board. The sole object in the amendment is to provide the Secretary of Agriculture with the best advice possible. A committee of agricultural chemists constitutes a suitable body for determining methods and standards for chemical analyses, but agricultural chemists are not fitted by their specialty to determine the effects of preservatives on the human body. It seems unnecessary to argue this point farther.

V. C. VAUGHAN

[With all due respect to Professor Vaughan, and recognizing the fact that he is thoroughly conversant with the subject, we are still of the opinion that the clause to which we objected last week is vicious. Our readers, however, may judge for themselves. The clause will be found in section 9 of the bill, which was published last week.—Ed.]

Miscellany

The Record of the House—Each house in Paris now has to have its sanitary record. It is something like a bank book or portfolio for each individual house. The cover bears the subdivision, ward, street and number, and inside is a small plan of the house, with designation of all drain pipes, cess pools, etc. A loose sheet contains a description of the house, another contains a record of all the cases of communicable diseases that have occurred in the building, and the deaths from them, recorded as they occur. Another sheet records the disinfections done on the premises, with dates and causes. One or more sheets contain the record of the changes ordered by the bureau of hygiene, and the record of the compliance with these orders. One or more sheets further contain the results of sanitary inspection of the house. All these house books for one street are kept in an envelope or box, which has a record on the outside of the length and width of the street, number of houses, number of inhabitants, system of sewerage, water pipes, etc. P. Juillerat is chief of the bureau d'assainissement de l'habitation et du Casier sanitaire des maisons de Paris, and thus has charge of all this work. It is part of the police department. He describes its workings in the first number of *Hygiène Générale et Appliquée*, Jan., 1906, and discusses the expense of introducing a system of "house books" (casier sanitaire). A French law of 1902 ordered the formation of a bureau of hygiene in every town of 20,000 inhabitants or over, and he assumes that the officials of this bureau will do the work necessary for the compiling of the records of each house. The first expense will not be much more than twenty cents a house, and, once installed, the expense of maintenance will be trifling. The Paris authorities are much gratified at the way in which the system is working, although scarcely more than commenced there.

Fallacies in the Clinical Diagnosis of Gonorrhea—Dr. G. Frank Lydston, Chicago, in a paper read before the Mississippi Valley Medical Association, said that the most dangerous type of infection of the female is that in which the external manifestations of the disease are absent or wanting. Gonorrheal urethritis in the female in the chronic form may present no secretion whatever on external examination. There may be little or no vaginal, cervical, or uterine discharge, and even such as there is may, on examination, fail to disclose the micro-organisms of gonorrhea. Notwithstanding this, the mucous glands may be involved, and under the influence of the mechanical effect of coitus the

physiologic hypersecretion might convey to the mentus gonococci in abundance. The result is obvious. It seems to Dr. Laidston that it is impossible for a physician to state in any given case that a woman is free from infection. This is one of the strongest arguments against regulation and medical inspection of prostitutes. He entertained serious objections to the medical profession constituting itself an assurance society for the protection and promulgation of the social evil, but aside from this scruple there remains the fact that no reliable system of inspection or examination can be devised. In many cases of infection of healthy women by a latent gonorrhea of the husband, mixed infection is responsible, and the resulting pathologic condition in the female is non-specific. Its being non-specific, however, does not preclude the possibility of its becoming very serious. Dr. Laidston thinks that there are no tests which will enable the physician to give a positive opinion of the infectiousness of a given case of suspected latent gonorrhea. The clinical history in many cases is more important than the laboratory study of the case, and a careful combination of both methods of study is always essential. The physician should be as chary of assuming responsibility in advising a gonorrheic in the matter of matrimony as he should be in advising syphilitics under similar circumstances.

Injuries from Quack Practices—The German Anti-quackery Society has been diligently collecting instances of injury from quack practices that have come under the personal observation of its members. A list has just been published in the organ of the society, *Huguenische Blätter* for February. It includes 91 cases of severe injuries, terminating fatally in 37. All the particulars are on file at the society's office. (See page 473.) In one case inflammation of the pelvic connective tissue was treated by a quack with daily energetic massage, resulting in fatal septicemia. In another an ovarian cancer was said to be the pregnant uterus and was massaged until too late for its removal. In another case a tubal pregnancy was treated as "colic." An incipient cancer of the cervix, diagnosed by a physician with the microscope, was treated by a quack with hydrotherapy, massage and electricity until it became inoperable. In 27 cases of serious injury resulting from quack treatment of surgical lesions 9 resulted in death from septicemia, including 1 death from general sepsis after a small wound on the finger had been treated with bone sawdust compresses for a long time. Two cases of incarcerated hernia resulted in fatal gangrene after being treated with sandbags in one case and with ice and water in the other. One individual succumbed to the effects of necrosis of the bone after a knee lesion had been long treated with a plaster spread on pieces of newspaper. Another with hip joint affection, treated with vigorous massage, succumbed to a resulting meningitis. One child died in consequence of a silve having been rubbed into its eye by a quack, and another was rendered blind. The cases are numerous in which cancers were allowed to become inoperable by wasting time with irregulars. The editorial concludes with the remark that many persons who have come to grief in the hands of irregulars are ashamed to confess it to the physician to whom they apply afterward. Others exonerate the quack for the evil results of his practices. One case is known in which a woman had been treated for cancer and her testimonial to her cure was repeatedly published in the papers. Investigation showed that she had died long since of her cancer. The quacks included magicians, naturopaths, nature healers, untrained midwives, bone setters, barbers, herb doctors, etc. Four were druggists, some of whom diagnosed and treated by letter.

Analyses of Food Products in Kansas—In the January *Bulletin* of the Kansas State Board of Health Prof. E. H. S. Bailey, state chemist, reports on adulterations. Having stated that many adulterants are harmless and are intended to increase the bulk or weight, at the customer's expense, while others are positively injurious, even poisonous, Prof. Bailey gives the results of his analysis of a number of samples of food, including flavoring extracts, preserved fruits, syrups, vinegar, nitrogenous foods, and baking powders. Of twenty-five articles tested he found twenty-one adulterated. He found a sample of "Puritan" brand extract of lemon to be destitute of oil of lemon and colored with a coal-tar dye.

Extract of vanilla, "Puritan" brand, "strictly pure," he reports contained none of the natural resins of the vanilla bean. "Silver Leaf" tomato catsup he found to be artificially colored and preserved with salicylic acid. He reports that a pint glass can of strawberry, "Orchard" brand preserve, was dyed red with a coal-tar dye and sweetened with glucose. A few small strawberries were scattered through it. "Absolutely Pure Canada Sap Maple Syrup" he discovered was cane sugar, a much cheaper article, and therefore a fraud on the customer. On analysis, two bottles of vinegar, one called "White Vinegar" and the other "Wine Vinegar," were found to be artificially colored distilled spirit vinegars. He reports that "The Kansas City Baking Powder, Absolutely Pure," and Shepard's "Economic Absolutely Pure Baking Powder," among others, were alum phosphate mixtures—perhaps pure in the technical sense, but not in the pure food sense.

Sanitary and Moral Prophylaxis—In the *Boston Medical and Surgical Journal*, Feb. 8, 1906, Dr. William L. Holt urges the organization of a state society on venereal prophylaxis. A year ago in New York the American Society of Sanitary and Moral Prophylaxis was founded. Similar societies already existed in Germany, Holland, and other European countries. The object of these societies is to limit the spread of diseases which have their origin in the social evil, and to study the best means of every order, moral, legislative, social and medical to be employed in the prevention of these diseases. Dr. Holt suggests a campaign of popular education similar to the anti-tuberculosis campaign. The ignorance of the masses, especially young people, concerning sexual hygiene, is deplorable. A system of education, whether at home or at school, is incredibly stupid if it leaves our children in darkness concerning the laws governing sexual function and the ravages and terrible consequences of venereal disease. Tainted and degenerate offspring, sterility, and abortion are among the strongest agents for race suicide. There should be a state branch of the national organization in every state in the union. It is a service which the medical profession owes to society to spread all the scientific information possible concerning this delicate and important matter.

Treatment of Chancroid by Heat—E. Welanders of Stockholm, describes in *Wiener Klin. therap. Wochenschr.* the method which he has employed for many years in the treatment of soft chancre by the prolonged application of warmth. He uses in the hospital an apparatus by which continuous circulation of water of regulated temperature is carried over the surface of the ulcer, which has been prepared by curetting away the sloughing material and thoroughly cleansed. A layer of moist cotton wool is first applied, then the lead tubes, which can be bent to suit the surface, then another layer of moist cotton, the whole is then warmly packed and secured with a bandage, which can be removed and renewed three or four times daily for the needs of urination and defecation. Two days' application may suffice, but it is better to keep it up a little longer, or if it is discontinued, to use warm boracic acid lotions until healing is complete. In private practice he allows the patient to make his own moist warm applications, either immersing the part in water at 50 C., or using frequently renewed applications of cotton soaked in water at 50 to 55 C. In either case the applications should be made at least four times a day and kept up for 15 to 20 minutes each time. After each one the ulcer should be dried and iodoform applied. The heat treatment has also been employed with good results for other foul sores (non-syphilitic) of the anogenital region. He has also used it in herpes tonsurans, but here a somewhat higher temperature is required on account of the somewhat greater resistance of the germs and spores.

Treatment of Typhoid—As to medicines, the passing years have lightened my armamentarium greatly. The coal-tar antipyretics ought rarely to be used, for while their immediate effect may be good their ultimate influence on the heart is bad. As Dr. Baruch of New York, the great hydrotherapist, has so facetiously put it, "their chief virtue is that they enable the patient to die with a normal temperature." On this account I prefer to reduce the temperature, when excessive by hydrotherapy, using tepid or cool sponging if the temperature be between 101.5 and 103. The cold pack, cool affusions, or the

cool or graduated bath, if it be above 103. If the temperature is below 101.5 degrees, I believe the patient is better left undisturbed. Cold to the head, by ice bags, Leiter's coils, or water compresses, is a valuable adjuvant. The value of these measures lies in four directions. First, lowering of temperature, secondly, as a nervous sedative, thirdly, general tonic effect on the heart, lastly, a lowered death rate—Van Ant, in *Denver Medical Times*.

Tuberculosis Dispensary at Madrid—V Montenegro publishes an interesting series of notes in the *Siglo Medico*, Nos 2626-8, taken during two years' workings of the Antituberculosis Dispensary at Madrid, with 1,000 tuberculosis patients. The majority were between 20 and 30 years old, or from 30 to 40, with over 2 per cent under 10, and over 14 per cent between 10 and 20 and between 40 and 50. About 66 per cent of the patients had no tuberculous family antecedents. In 50 per cent of all the patients the chest measure was equal to or more than half the height. In a number of cases of hemoptysis it proved to be the result of mitral stenosis. The lungs presented physical signs suggesting a tuberculous lesion probably from compression of the lung by the dilated auricle, but repeated examination and radiology failed to reveal any tuberculous process. Such patients were generally women.

Double Nephrotomy for Kidney Stones—M. Dezarlo describes some unusual circumstances attending the removal of four kidney stones weighing 45 gm, nearly 625 grains, from a woman of 28. The pains and discomfort were always in the left kidney and a radiogram showed the four stones plainly. The operator did not see the radiogram and consequently he opened up the left kidney finding it sound and free from stones. Examination of the radiogram then revealed that the stones were in the "silent" right kidney. All disturbances ceased after the nephrotomy, and nothing further was attempted for seven months, when recurrence of pain compelled intervention on the other kidney. The stones were found as shown in the radiogram and easily removed with the rapid recovery of the patient. They consisted principally of calcium phosphate—*Siglo Medico*.

Bars to Therapeutic Progress—"In the domain of science every fact is a legal tender." Publicity is essential to progress. In medicine secrecy stultifies the calling and its followers, making it the only learned profession of the age which in so far, yet lingers in the embrace of the middle ages. Obviously no real therapeutic progress is possible where the prescriber and the world is informed only that the triumphant conduct of a certain case from death's door to convalescence has been wrought through the mediumship of "Puffer's Preposterous Painfugine," with the composition of which the enterprising manufacturer has not seen fit to entrust the complete prescriber—Jackman, in *Journal of Medicine and Surgery*.

Sectarianism Harmful—The realization that sectarianism is restrictive rather than helpful, that it divides and weakens, where union and strength are needed, has made the great majority of physicians in all ages desire a united profession. They have sought to avoid the use of any term that would imply a school or sect—*Columbus Medical Journal*.

Association News

Member or Subscriber

In the American Medical Directory, now being prepared for the press, members of the American Medical Association will be designated by the symbol $\oplus$. There are a number of physicians taking *THE JOURNAL* as subscribers who are eligible to membership. Any one in doubt as to whether he is receiving *THE JOURNAL* as a member or as a subscriber can refer to the address label on the wrapper of his *JOURNAL*, if the month and year appear, such as '71 06,' it means that the name is on the list of subscribers, if only the year '06,' or no date at all appears the name is on the membership roster. On advertising page 40 in this issue is an application blank, and any subscriber who is eligible, desiring to become a member can be transferred to the membership roll by signing the

application, having it certified by the secretary of his state society and forwarding it, together with receipt for current year's subscription, or a remittance covering the same, to the American Medical Association, 103 Dearborn Avenue, Chicago.

Marriages

LAWRENCE H. BRUNDAGE, M.D., to Miss Martha Glotfelter, both of Xenia, Ohio, March 1.

OSWALD O. KAUFER, M.D., Newbern, N. C., to Miss Lillian May Taggart, at Baltimore, March 7.

JOHN U. CALHOON, M.D., Follansbee, W. Va., to Mrs. Elizabeth Witner, at Darlington, Pa., March 5.

HENRY KREUDER, M.D., New York City, to Miss Charlotte Louise Masecar of Monroe, Mich., March 6.

EDWARD W. HANLON, M.D., Marysville, Cal., to Miss Mamie Kelly of Napa, Cal., in New York City, last week.

JAMES E. MADDUX, M.D., Sebastopol, Cal., to Mrs. Eugenia Cantel Towne of Petaluma, at San Francisco, March 12.

Deaths

Peter Van Pelt Hewlett, M.D. New York University, New York City, 1868, a member of the Essex District (N. J.) Medical Society, president of the Newark Medical Association in 1871 and 1872, and its secretary in 1899 and 1870, for several years a member of the Newark Pathological Society, and for a long time secretary and curator of the New Jersey Academy of Medicine, from 1868 to 1874 attending physician at the city dispensary, in 1873 attending physician and curator of St. Michael's Hospital, from 1879 to 1891 county physician, for many years visiting physician at the Newark City Hospital, and a member of the board of education from 1870 to 1883, died at his home in Newark, March 13, after an illness of nearly a year, believed to be malignant, aged 59.

Leonard Lawshe Skelton, M.D. Northwestern University Medical School, Chicago 1889, professor of nervous and mental diseases at the Illinois Medical College, professor of internal medicine and physical diagnosis, Chicago Clinical School, professor of physiology, Chicago College of Dental Surgery, for several years a member of the staff of the Illinois Eastern Hospital for the Insane, Kankakee, died at his home in Chicago, March 14, from uremia, after an illness of three days, aged 42.

Alvin Thayer, M.D. Medical College of Louisiana, New Orleans, 1845, a member of the American Medical Association and of the Medical Society of the State of Pennsylvania, one of the best known physicians of Erie, and a member of a distinguished family of physicians extending back several generations, surgeon of the One Hundred and Forty-fifth Pennsylvania Volunteer Infantry during the Civil War, died at his home in Erie, March 11, after an illness of more than a year, aged 81.

Joseph Vincent Ricketts, M.D. Miami Medical College, Cincinnati, 1891, son of Dr. Girard Robinson Ricketts, and brother of Drs. Edwin S. and B. Merrill Ricketts of Cincinnati, a graduate of the United States Naval Academy, Annapolis, for several years a practitioner of Cincinnati, died at his home in Gas City, Ind., March 12, from pulmonary edema, after a brief illness, aged 39.

Elizabeth N. Bradley-Bystrom, M.D. University of Paris, France, 1887, formerly a practitioner of New York City, and a member of the New York Academy of Medicine, New York and New York Neurological Society, died at her home in Dobbs Ferry, N. Y., March 9, from paralysis, after a long illness, aged 53.

Fordeyce H. Benedict, M.D. Albany (N. Y.) Medical College, 1868, the dean of the medical fraternity of Weedsport, N. Y., a veteran of the Civil War, and a member of the Cayuga County Medical Society, died at his home March 8, from pneumonia after an illness of three weeks, aged 61.

John B. Brown, M.D. Medical College of the State of South Carolina, Charleston, 1859, a member of the Medical Society of the State of North Carolina and of the Robeson County Medical Society, died at his home in Ashpole, N. C., December 31, after an illness of a month.

Grove Spooner Beardsley, M D, medical director United States Navy, retired Jan 2, 1900, with the rank of rear admiral, a member of the American Medical Association, a veteran of the Civil War and of the Spanish-American War, of Syracuse, N Y, died in Atlantic City, N J, March 8, aged 68

Earl V Rowe, M D St Louis College of Physicians and Surgeons, 1893, of Gila Bend, Ariz, physician to the Southern Pacific Railway at that point, died in St Mary's Hospital, Tucson, March 8, from tuberculosis, after an illness of four years, aged 32

Shelby M Dodson, M D St Louis Medical College, 1864, postmaster of Santa Clara Cal, for four years, and for many years a practitioner of Santa Clara and San Jose, died at his home in the latter city, March 1, after a long illness, aged 67

Lauren T Holland, M D College of Physicians and Surgeons, St Joseph, Mo, 1882, coroner of Los Angeles County from 1889 to 1903, a veteran of the Civil War, died suddenly at his home in Los Angeles, March 6, from heart disease, aged 62

Garrett D Buckner, M D Jefferson Medical College, Philadelphia, 1861, for many years a practitioner at Petersburg and Tullahoma, Tenn, died at the home of his son in law in Nashville, January 21, after an illness of five months, aged 65

William Harper Sherwood, M D Cleveland Medical College, 1855, one of the most prominent practitioners of Painesville, Ohio, died at his home in that city March 10, from pneumonia, after an illness of less than a week, aged 73

Charles Edward Estes, M D Bellevue Hospital Medical College, New York City, 1868, a veteran of the Civil War, died at his home in Columbus, Ga, March 6, from ptomaine poisoning, after an illness of two days, aged 63

Elijah L Irvine, M D Willamette University, Medical Department, Salem, Ore 1883, formerly a practitioner of Portland, Ore, was found dead, March 12, at his room in the Lack House, San Francisco, aged about 45

James Hyser Hill, M D University of Louisville, Medical Department, 1850, assistant surgeon of the Thirteenth Missouri Volunteer Infantry during the Civil War, died at his home in Springfield, Ill, March 6, aged 81

Benjamin R Pearson, M D Medical College of Alabama, Mobile, 1881, of Montgomery, Ala, died at the home of his daughter in Richmond, Ky, from locomotor ataxia, March 11, after an illness of seven years, aged 56

P W Blakeley, M D (Years of Practice, Illinois), 1878, for nearly twenty years a practitioner of Galatia, Ill, died at his home in Marion, Ill, March 4, from lung disease, after an illness of several months

Charles W Townsend, M D New York Homeopathic College and Hospital, New York City, 1893, of New York City, died from brain abscess at the Hahnemann Hospital, New York City, March 7, aged 37

John W Cooper, M D Hahnemann Medical College, Philadelphia, 1884, health officer for Cecil County, Md, died at his home in Elkton, Md, March 10, from nephritis, after an illness of several years, aged 56

O C Gilliland, M D Medical Department of Columbian University, Washington, D C, 1894, died at his home in Washington, March 1, from disease of the lungs, after an illness of more than a year, aged 36

John Benjamin Humphrey, M D Kansas City Homeopathic Medical College, 1897, died in Colorado City, Colo, January 1, from tubercular meningitis, after an illness of twenty one months, aged 36

R H Darling, M D College of Physicians and Surgeons, Keokuk, Iowa, 1882, of Crystal Falls, Mich, died in St Agnes' Hospital, Fond du Lac, Wis, from brain tumor, March 7, after a long illness

Lawrence J Gerold, M D Baltimore Medical College, 1901, assistant surgeon at the State Soldiers' Home Hospital, Bath, N Y, died at that institution, March 15, from heart disease, aged 41

Henry J Fortlage, M D University of Bonn, Germany, 1884, a charter member of the Cleveland Academy of Medicine died at his home in that city, March 8, after a protracted illness, aged 48

Cassander Paddock, M D Bennett College of Eclectic Medicine and Surgery, Chicago, 1875, died at his home in Fresno, Cal, from cancer, after an illness of nearly two years, aged 56

Jewett Williams, Jr, M D Detroit College of Medicine, 1890, died at his home in Adrian, Mich, March 9, from osteosarcoma of the pelvis, after an illness of nearly five months, aged 42

Francois Xavier Perrault, M D Ecole de Medecine et de Chirurgie, Montreal, 1850, formerly superintendent of the St Jean de Dieu Insane Hospital at Longue Pointe, Quebec, died March 6, at the Hotel Dieu, Montreal, after an illness of two weeks, aged 80

A D Axtell, M D Columbus (Ohio) Medical College, 1854, of Youngsville, Pa, died at the State Hospital, North Warren, Pa, January 20, after an illness of two years, aged about 80

Donald Kennedy, M D Kentucky School of Medicine, Louisville, 1894, formerly of Shelbyville, Ind, died recently from consumption in Denver, Colo, after an illness of five years

Hugh Nelson, M D Washington University School of Medicine, Baltimore, 1867, died at his home in Minneapolis from disease of the liver, after an illness of two weeks, aged 63

Charles Edward Prentiss, M D University of Georgetown, Medical Department, Washington, D C, for many years assistant librarian of Middlebury (Vt) College, died recently

John L Hebron, M D Tulane University of Louisiana, Medical Department, New Orleans, 1853, died at his home in Hot Springs, Ark, March 8, from angina pectoris, aged 73

C W Higgins, M D Starling Medical College, Columbus, 1865, died at his home in Derby, Ohio, March 8, from cerebral hemorrhage, after an illness of five months, aged 69

Hannah Christiana Golden, M D State University of Iowa, College of Homeopathic Medicine, Iowa City, 1882, died at her home in Vinton, Iowa, March 6, after a long illness

Edward W Derby, M D New York University, New York City, 1853, for more than fifty years a practitioner of New York City, died at his home, March 10, aged 77

Emil Luck, M D Dartmouth Medical School, Hanover, N H, 1885, died at his home in Paterson, N J, March 8, from chronic nephritis, after a long illness, aged 37

Cassius W Brooks, M D University of Vermont, Medical Department, Burlington, 1870, died recently at his home in Interprise, Kan, and was buried March 10

Adam K Leberknight, M D Jefferson Medical College of Philadelphia, 1878, died at his home in Orrstown, Pa, March 4 after an illness of six months, aged 55

Rush M Brown, M D College of Physicians and Surgeons in the City of New York, 1882, died at his home in Cordele, Ga, January 11, after a long illness, aged 48

James A O'Malley, M D New York University, New York City, 1887, died at his home in Pittston, Pa, from pneumonia, after an illness of two weeks, aged 43

William H Loomis, M D Hahnemann Medical College and Hospital, Chicago, 1876, of San Francisco, Cal, died at his home in East Oakland, Cal, February 9

W J Pyland, M D Vanderbilt University, Medical Department, Nashville, 1867, died at his home in Wimberley, Texas, March 4, after a lingering illness

Nicholas J Dorsey, M D University of Maryland School of Medicine, 1847, for many years a practitioner of Chicago, died in Joliet, Ill, March 11, aged 84

William Gordon Niles M D Jefferson Medical College, Philadelphia, 1904, died from pneumonia in the Presbyterian Hospital, Philadelphia, March 16

Thomas W Bortree, M D Jefferson Medical College, Philadelphia, 1889, died at his home in Winwood, Pa, March 4, from heart disease, aged 46

Frank J Freel, M D Long Island College Hospital, Brooklyn, N Y, died from pneumonia at his home in Stony Creek, Conn, March 9, aged 47

Robert W Duncan, M D University of Louisville, Medical Department, 1876 died recently at his home in White Mills Ky, from paralysis

Frederick C Hennessy, M D Bellevue Hospital Medical College, New York City, 1897, died recently at his home in San Diego, Cal

Francis H Whitsitt, M D College of Physicians and Surgeons, San Francisco, 1897, died recently at his home in Kernville, Cal

J Edgar Shepard, M D Missouri Medical College, St Louis, 1883, died from heart disease at his home in Skidmore, Mo, March 4

Lewis M Webb, M D St Louis Medical College, 1872, of Ewing, Ill, died at his home in that city, March 9, aged 59

Queries and Minor Notes

MEDICINES CONTAINING ALCOHOL—SODIUM CHLORIDE ELIMINATION—SODIUM CACODYLATE IN CHOLERA.

PLAINES, KANS., March 7 1906

To the Editor—1 Can you give me any information pertaining to the sales of patent and proprietary medicines containing a certain percentage of alcohol as I understand that the ruling of the Department of Internal Revenue will go into effect about April 1 I wish to know what medicines it will include
2 What drugs will rid the system of hyper sodium chloridia either chemically or mechanically, as advocated in certain forms of nephritis and epilepsy?
3 Has sodium cacodylate ever been advocated in treatment of cholera?

G. A. NICKELSON, M.D.

ANSWER—1 The following preparations will be affected by the ruling referred to Atwoods La Grippe Specific, Cuban Ginger, DeWitt's Stomach Bitters, Dr Bouvier's Buchu Gln Dr Fowler's Meat and Malt Duffy's Malt Whiskey, Gilbert's Rejuvenating Iron and Herb Juice Hostetter's Stomach Bitters, Kudros, Peruna Rock candy Cough Cure.

2 There is no drug that will reduce the chlorid of sodium in the blood and urine as the chlorid content of the blood and urine is dependent exclusively on the sodium chlorid or the hydrochloric acid given by mouth. Practical measures therefore for restricting the sodium chlorid excretion are to restrict the use of table salt to a minimum and not to give any hydrochloric acid as a stomachic. In epilepsy, a very good plan and one that is commonly adopted, is to replace the sodium chlorid by sodium bromid. This can conveniently be done by placing a saltcellar containing sodium bromid at the disposal of the epileptic patient. The substitution of sodium bromid for sodium chlorid answers a double purpose. In the first place, it withholds sodium chlorid and in the second place the bromin seems to facilitate the excretion through the bowel and the urine of accumulated sodium chlorid.

3 Cacodylate of soda is presumably the best symptomatic remedy for the treatment of cholera. It should be given in large doses hypodermically. A very good mode of administering it is to inject half a Pravaz syringe full of a solution containing half a grain to the ounce, every four hours until the choreiform movements stop. Astonishing results are frequently witnessed within 24 hours. Effects of arsenic poisoning rarely become manifest. The attention should be called to the fact that the breath will assume a very strong odor of garlic very soon after the administration of the first dose.

CONTRACT PRACTICE

KANKAKEE ILL., March 19 1906

To the Editor—In THE JOURNAL March 17 page 824 I note communication by Dr G. E. Holtzapple York, Pa., and as a partial answer to his questions and acting on your suggestion I submit the action taken by the Kankakee Physicians Club in such matter. The following resolutions are self explanatory.

Resolved That on and after the date of the passage of this resolution no member of this society shall accept the position of club society or organization company or corporation physician, or agree to continue to do any medical or surgical work for any club society or organization company or corporation at a less rate than the regular or customary charges for like services rendered by other physicians members of this club, for patients not members of such club society or organization company or corporation, and also that in no case shall any physicians agree to attend the families of the members of such club society or organization company or corporation at a less price than the regular rate of fee as fixed by this club.

Provided however that nothing in this resolution shall be construed as preventing any member of this club from attending the worthy poor at a less rate or rendering free service if necessary in such cases.

Any violation of this agreement shall be considered unprofessional conduct and the punishment of any member violating the provisions of this act shall be fixed by the club.

Resolved That no physician of this club make an examination for old line insurance companies for a less fee than

For \$1 000 or less	\$3 00
Over \$1 000	5 00
Over \$5 000	10 00

Adopted Feb 16 1906

A. L. GAGNON, Secretary

IS INSOMNIA EVER FATAL?

PLANT MICH March 5 1906

To the Editor Do you know of any cases that have ever been recorded in medical literature of persons whose death was caused directly by loss of sleep? Such cases are very rare and on that account if any have ever been recorded, one ought to be able to find some account of them. Where would one be most liable to find any literature on the subject? R. W. RUTHERFORD, M.D.

ANSWER—It would probably be hard to find a reported case of death from sleeplessness absolutely exclusive of all contributing factors. The causes that would prevent sleep would themselves be destructive of life. If continued. It would also be difficult to say that a case of insomnia was absolute. Men have been known to

sleep under the most unfavorable conditions, and, it is said even in the briefest intervals of torture. Apparent sleeplessness, more over, may exist to a very large extent in some cases in some forms of insanity, especially the so-called circular type. Patients have been known to go apparently without sleep for days and even weeks at a time without any serious physical consequences. They probably did sleep some but it could hardly be detected. The amount of sleep required varies greatly with the individual and it is claimed that some distinguished men have lived for considerable periods with one, two or three hours sleep out of the twenty four. These cases, however, were not under conditions satisfactory for physiologic experiments. It has been said that the Chinese have a punishment for criminals which consists in depriving them of sleep until death comes to their relief, but there are no scientific observations of such cases, as far as we are aware, and it would be hard to prevent the means used to cause insomnia from themselves contributing to the fatal result. It can be safely said that there are no recorded satisfactory observations of fatal absolute insomnia.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers U. S. Army, week ending March 17 1906

Davis, Wm. B., deputy surgeon, relieved from duty as chief surgeon department of the Columbia, and will proceed to New York City, N. Y., for temporary duty at Medical Supply Depot.

Wolfe, Edwin P., Shockley, M. A. W., Shaw, Herbert G., and Halsei, H. S., asst. surgeons, relieved from duty in the Philippines Division and ordered to proceed to San Francisco and on arrival to report by telegraph to the military secretary of the Army for further orders.

Egan Peter R., surgeon ordered to report in person to Major General James F. Wade, U. S. Army, president of an Army retiring board at Governors Island, N. Y. for examination by the board and on completion of his examination will return to station Fort Hamilton, N. Y.

Woodson Robert S., surgeon, leave of absence extended 10 days. Keefer Frank R., surgeon, reports on 30 days leave of absence from date March 12, 1906.

Davis, William T., asst. surgeon on arrival in the United States, will proceed without delay to Washington Barracks, D. C., and report to the commanding officer of the General Hospital at that post for duty with Company 'A' Hospital Corps.

Torney Geo. H., deputy surgeon general in addition to his present duties will on the retirement of Col John D. Hall, asst. surgeon general report to the commanding general Department of California, for duty as chief surgeon of that department and also assume the duties of Medical Superintendent Army Transport Service, at San Francisco.

LaGarde Louis A., Ebert, Rudolph G., Purviance, Wm. E., surgeons appointed members of a board of medical officers to meet at the call of the president thereof at Manila, P. I., for the examination of such officers of the Medical Department as may be ordered before it to determine their fitness for promotion or advancement.

The following named officers will report in person on Tuesday May 8 1906 to Major Louis A. LaGarde, surgeon president of examining board Manila, P. I., for examination to determine their fitness for advancement. McAndrew P. H., first lieutenant Van Poole, G. McD., first lieutenant Gosman Geo. H. R., first lieutenant Van Dusen, James W., first lieutenant De Witt, Wallace, first lieutenant Thornburgh, R. M., first lieutenant Grubbs, R. B., first lieutenant Shortridge, D. D., first lieutenant Field, Peter C., first lieutenant Shaw, Herbert G., first lieutenant.

Keefer Frank R., surgeon the leave of absence granted in S. O. 50 Department of California, c. s., for 30 days is extended one month.

Prives, Will L., asst. surgeon left Jefferson Barracks, Mo. with recruits en route to Presidio of San Francisco.

Hallock H. M., surgeon, sick leave extended 30 days.

Whinnery Jean C., dental surgeon ordered from Fort Stevens Ore. to duty at Fort Columbia, Wash.

Casaday George H., dental surgeon ordered, on arrival at San Francisco to duty at the Army General Hospital Presidio of San Francisco.

Stone Frank P., dental surgeon relieved from duty at the Army General Hospital Presidio of San Francisco and ordered to duty at Fort Sam Houston, Texas.

Landerdale, Clarence E., dental surgeon relieved from duty at Fort Sam Houston, Texas and ordered to Manila, P. I. for duty in the Philippines Division.

Rhoades Rex H., dental surgeon relieved from duty in the Philippines Division and ordered to the United States on the first transport after May 3 1906.

Navy Changes

Changes in the Medical Corps U. S. Navy for the week ending March 17 1906

Dunn H. A. P., A. surgeon detached from the naval proving ground, Indian Head, Md., and ordered to the Princeton.

Manchester J. D., asst. surgeon detached from the Princeton and Baker M. W. P., A. surgeon detached from the Naval Hospital Washington, D. C., and ordered to the Naval Hospital, New York.

Chappell F. D., acting asst. surgeon ordered to the Naval Hospital Washington, D. C.

Langhorne C. D., surgeon detached from the Denver and ordered home to wait orders.

Lamden G. P., surgeon detached from the Olympia when put out of commission and ordered to the Minneapolis.

Norton O. D., surgeon detached from the Minneapolis and ordered home to wait orders.

Plummer, R. W., P. A. surgeon, detached from the naval sub recruiting station, St. Joseph, Mo., and ordered to the *Denver*.
Smith, W. B., asst surgeon detached from the *Olympia*, when put out of commission and ordered to the *Hancock*.
Cone, I. I., and Flint, I., asst surgeons, appointed assistant surgeons, with rank of lieutenant, junior grade, from February 28, 1906.

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine Hospital Service for the seven days ending March 14, 1906

Wickes, H. W., P. A. surgeon, granted leave of absence for two days from March 16, 1906

King, W. W., P. A. surgeon, granted leave of absence for one month from March 12, 1906

Goldberger, Joseph P., A. surgeon granted leave of absence for twenty-one days from April 11, 1906

Ames, J. W., P. A. surgeon directed to proceed from Ellis Island, N. Y., to New Orleans for special temporary duty in the state of Louisiana

Burkhalter, I. I., P. A. surgeon, granted extension of leave of absence for ten days from March 2, 1906

Bogges, I. S., asst surgeon, granted three days leave from March 12, 1906

Rueler, W. G., asst surgeon relieved from temporary duty at Vineyard Haven, Mass., and directed to proceed to New Orleans, for special temporary duty in the state of Louisiana

Smith, F. C., asst surgeon directed to proceed from Detroit to New Orleans for special temporary duty in state of Louisiana

Goldborough, B. W., acting asst surgeon, granted two days' leave of absence from March 14, 1906

Richardson, N. D., acting asst surgeon, granted leave of absence for thirty days from March 7, 1906

Stephenson, Chas. W., Pharmacist, granted leave of absence for thirty days, from March 12, 1906

BOARDS CONVENED

A board of medical officers was to meet at the Bureau, Washington, D. C., April 2, 1906, to determine the fitness for promotion to the grade of surgeon of certain passed assistant surgeons. Detail for the board: Assistant Surgeon General W. J. Pettus, chairman, Assistant Surgeon General J. M. Lager and Surgeon L. L. Williams, recorder

A board of medical officers was to meet at Mobile, Ala., March 17, 1906, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: P. A. Surgeon Edward Francis, chairman, Acting Assistant Surgeon A. S. Taylor, recorder

A board of medical officers was to meet at Chicago, March 13, 1906, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: P. A. Surgeon G. B. Young, chairman, P. A. Surgeon S. B. Grubbs, recorder

A board of medical officers was to meet at the Bureau, Washington, D. C., March 15, 1906, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Assistant Surgeon General J. W. Kerr, chairman, Assistant Surgeon J. W. Trask, recorder

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the week ended March 16, 1906

SMALLPOX—UNITED STATES

California, Los Angeles, Feb. 24-March 3, 5 cases, San Francisco 6 cases, 1 death

Delaware, Wilmington, March 3-10, 1 case.

Florida, Jacksonville, Feb. 24-March 10, 17 cases

Georgia, Augusta, March 5-12, 1 case

Louisiana, New Orleans, March 3-10, 20 cases.

Maryland, Baltimore, March 2-10, 6 cases

Massachusetts, Somerville, March 3-10, 1 case

Michigan, Detroit, March 3-10, 3 cases

Mississippi, Natchez, Feb. 24-March 3, 2 cases

Missouri, St. Louis, March 3-10, 4 cases

North Dakota, Grand Forks County, Jan. 1-31, 1 case, McHenry County, 29 cases, Nelson County, 6 cases, Ward County, 1 case.

Ohio, Cincinnati, March 2-9, 8 cases

Tennessee, Memphis, Feb. 24-March 3, 3 cases, Nashville, March 3-10, 1 case

Utah, Salt Lake City, Feb. 24-March 3, 16 cases

SMALLPOX—FOREIGN

Brazil, Rio de Janeiro, Jan. 21-Feb. 11, 13 cases, 3 deaths

China, Hongkong, Jan. 27-Feb. 3, 2 cases, 2 deaths

Cuba, Havana, Feb. 4-18, 10 deaths

France, Paris, Feb. 17-24, 9 cases, 1 death

Great Britain, Bristol, Feb. 17-24, 1 case, Leeds, Feb. 19-26, 1 case

India, Bombay, Feb. 6-13, 9 deaths, Calcutta, Jan. 27-Feb. 3, 143 deaths, Karachi, Feb. 4-11, 12 cases, 1 death, Madras, Feb. 3-9, 22 deaths, Rangoon, Jan. 27-Feb. 3, 40 deaths

Italy, General, Feb. 8-22, 40 cases

Netherlands, The Rotterdam, Feb. 17-24, 1 case

Russia, Moscow, Feb. 3-10, 16 cases, 2 deaths, Odessa, Feb. 10-17, 3 cases, 3 deaths, St. Petersburg, March 3-17, 15 cases, 2 deaths

Spain, Barcelona, Feb. 10-20, 8 deaths

Turkey, Alexandretta, Feb. 10-17, 20 cases, 4 deaths.

YELLOW FEVER—FOREIGN

Brazil, Rio de Janeiro, Jan. 21-Feb. 11, 19 cases, 6 deaths

Ecuador, Guayaquil, Feb. 4-19, 17 deaths

Honduras, Puerto Cortes, March 13, 1 case.

Mexico, Merida, Feb. 18-24, 1 case

CHOLERA—INSULAR

Philippine Islands, Manila, Jan. 6-20, 4 cases, 4 deaths, Provincas, 336 cases, 240 deaths

CHOLERA—FOREIGN

India, Calcutta, Jan. 27-Feb. 3, 57 deaths, Rangoon, 2 deaths

PLAGUE—INSULAR

Philippine Islands, Manila, Jan. 6-20, 2 cases, 2 deaths

PLAGUE—FOREIGN

Brazil, Rio de Janeiro, Jan. 21-Feb. 11, 10 cases, 3 deaths

China, Hongkong, Jan. 27-Feb. 3, 5 cases, 5 deaths

India, Bombay, Feb. 6-13, 121 deaths, Calcutta, Jan. 27-Feb. 3, 31 deaths, Karachi, Feb. 4-11, 9 cases, 6 deaths, Madras, Feb. 3-9, 13 deaths, Rangoon, Jan. 27-Feb. 3, 25 deaths

Peru, Callao, Jan. 26-Feb. 12, 1 case, Chicama Valley, Feb. 11-21, 1 case, Chilcayo, Jan. 26-Feb. 12, 5 cases, 1 death, Cholsica, 3 cases, 2 deaths, Mansefu, Feb. 14-21, present, Moche, 1 case, Mollendo, Jan. 20-Feb. 12, 4 cases, 3 deaths, Trujillo, 16 cases, 10 deaths

Book Notices

URIC ACID. The Chemistry, Physiology and Pathology of Uric Acid and the Physiologically Important Purin Bodies with a discussion of the Metabolism in Gout. By I. H. McGradden. Paper 1p. 318. Price, \$2.50 net. Cloth, \$3.00 net. New York: Paul B. Hoeber.

This little volume from the laboratory of physiology and chemistry of the Harvard Medical school, constitutes the most complete literary review of the uric acid question that so far has been published. The pure chemistry of uric acid and of the whole group of purin bodies, the solubility of uric acid and the urates, the physiology of uric acid, including its formation and decomposition in the body, the effects of drugs on the excretion and solubility of uric acid, and finally, its pathology and metabolism in gout and lithemia, are all very carefully discussed. The facts collected, therefore, represent practically all that is known in regard to the uric acid subject, and the author deserves immense credit for his diligent search through innumerable publications for the material that forms the basis of his book.

The conclusions that the author draws from his collected data, including some experiments of his own, are, on the whole, sound. His avowed purpose is to rely on the arrangement of the facts themselves to bring out the explanation of the phenomena. This is a good plan, so far as it goes, but, unfortunately, the large and valuable field of clinical experience, or what may be called empiricism, especially in regard to the therapeutics of uric acid disorders, is not sufficiently included in the calculation. While we agree with the author that "rheumatic diseases and uric acid metabolism do not at the present time seem to be closely related," and while we indorsely heartily his severe arraignment of Haig's theories and the many fallacies and inconsistencies inherent in the irrational use of many so-called uric acid remedies, we nevertheless can not without qualification endorse the statement that "the facts of chemistry and physiology do not furnish any scientific evidence for the alkali therapeutics of gout" nor can we agree with him when he says that uric acid is not an antecedent of urea in the destructive metabolism of proteins, for it most assuredly is at least one of the intermediary bodies between albumin and urea.

Particularly valuable is the chapter on the uric acid solvents, for the author shows most conclusively that most of them, in the very nature of things, are inert and useless. First, because uric acid can not be accused of producing the protean array of symptoms summarized under the name of uric acid diathesis, and, second, because these various remedies could not exercise appreciable effect either on the uric acid excretion or its precipitation in the tissues, even if uric acid were the *fons et origo malorum*.

The book is an exceedingly useful volume for both reference and connected reading, it is critical but just, and should help clear up the mist of theory and false conceptions that obscure so densely our understanding of uric acid metabolism and of its significance, or, better, lack of significance, in pathogenesis.

GALVANIC, FARADIC AND SYNOUSIAL APPARATUS. Pp. 132. Illustrated. For free distribution. Chicago: R. V. Wagner Company, 1906.

This is practically a catalogue, but besides a list of apparatus it contains much information of value to physicians interested in electrotherapeutics, information that evidently is furnished by one who thoroughly understands the subjects.

MATERIA MEDICA, PHARMACY AND THERAPEUTICS Including the Physiological Action of Drugs the Special Therapeutics of Disease, Official and Practical Pharmacy Minute Directions for Prescription Writing and Avoiding Incompatibility also the Antidotal and Antagonistic Treatment of Poisoning By S O L Potter A M M D, M R C P Tenth Edition Revised and in greater part rewritten Cloth. Pp 914 Price, \$5 00 net. Philadelphia P Blakiston's Son & Co 1906

This edition has been largely rewritten to conform to the new Pharmacopœia, many new articles have been added and material considered obsolete or of slight importance has been omitted. The new matter includes a list of incompatibles for each drug, as well as descriptions of many comparatively new drugs, chiefly synthetics, which makes the book more valuable for practicing physicians. The articles on acetanilid, acetophenetidin, acids, alkalies, animal extracts and several standard drugs have been rewritten. The general arrangement of the subjects is the same as in previous editions.

A MANUAL OF MATERIA MEDICA AND PHARMACOLOGY, Comprising all Organic and Inorganic Drugs which are or have been official in the United States Pharmacopœia together with Important Allied Species and Useful Synthetics Especially Designed for Students of Pharmacy and Medicine as well as for Druggists, Pharmacists and Physicians. By D V R Culbreth Ph G M D Fourth Edition Enlarged and Revised, with 487 Illustrations. Cloth Pp 976. Price \$4 75 Philadelphia Lea Brothers & Co, 1906

The popularity of Professor Culbreth's work is evidenced by the fact that four editions of the book have appeared within the last nine years. As a compendium of materia medica and pharmacology it will be found most useful to the student, both of pharmacology and of medicine, as well as to the practicing pharmacist or physician. It is concise and comprehensive and can be commended to physicians who desire a work of this character.

MEMORANDA ON POISONS By T H Tanner M D F L S Tenth Revised Edition. By H Leffmann A M M D Cloth. Pp 177 Price 75c. Philadelphia P Blakiston's Son & Co 1905

New matter has been inserted in this edition of Tanner's manual without materially increasing the size of the book, which is convenient for carrying in the pocket. The subjects of general toxicology, corrosive poisons, simple irritants, specific irritants and neurotic poisons, including narcotics, anesthetics, intoxicants and drugs producing delirium, convulsions, paralysis and asphyxia are considered and the antidotes given.

State Boards of Registration

COMING EXAMINATIONS

UTAH State Board of Medical Examiners Salt Lake City April 2 Secretary R W Fisher Salt Lake City
ARIZONA Board of Medical Examiners Phoenix, April 23 Secretary Ancl Martin Phoenix
CALIFORNIA Board of Medical Examiners San Francisco April 23 Secretary Charles L Tisdale, San Francisco
IDAHO State Board of Medical Examiners Pocatello April 3 Secretary J D Conant, Jr Genesee
MONTANA Board of Medical Examiners Senate Chamber the Capitol Helena April 3 Secretary William C Riddell Helena
NORTH DAKOTA State Medical Examining Board, Grand Forks April 3 Secretary H M Wheeler Grand Forks
OHIO Board of Registration and Examination State House Columbus April 3 Secretary D N Kinsmann Columbus
MINNESOTA State Board of Medical Examiners State Capitol Building St Paul April 3 Secretary O E Linjer Minneapolis
MISSOURI State Board of Health, Kansas City April 3 Secretary J A E Adcock, Warrensburg
RHODE ISLAND State Board of Health State House Providence, April 5 Secretary Gardner T Swarts Providence
GEORGIA Medical Examining Board (Regular) the Capitol Atlanta April 7 Secretary E L Anthony Griffin
ARKANSAS State Board Medical Society Little Rock April 10 Secretary J P Runyan, Little Rock
MISSOURI State Board of Health St. Louis, April 10-12 Secretary J A B Adcock, Warrensburg
WEST VIRGINIA State Board of Health Parkersburg April 10-12 Secretary H A Barbee, Point Pleasant
DISTRICT OF COLUMBIA Board of Medical Supervisors Washington D C April 12 Secretary William C Woodward, Washington D C
ILLINOIS STATE BOARD OF HEALTH Northwestern University Building Chicago April 18-20 Secretary, J A. Egan Springfield.

Arkansas Report Correction.—The report of the examination held at Little Rock, in January, 1906, in THE JOURNAL, Feb 10, 1906, page 455, implies that a graduate of Tufts Medical

College and of the American Medical College failed. This applicant was a graduate of the American College of Medicine and Surgery, having attended Tufts for three years and the college from which he graduated for one year.

Nebraska February Report—Dr George H. Brash, secretary of the Nebraska State Board of Health, reports the written examination held at Lincoln, Feb 7 8, 1906. The number of subjects examined in was 8, total number of questions asked, 80, percentage required to pass, 75. The total number of candidates examined was 8, of whom 3 passed and 5 failed. The following colleges were represented:

College	PASSED	Year Grad	Per Cent
College of I and S, Chicago	(1905)	77	1
Barnes Med. Coll	(1905)	75	
Eclectic Med Inst., Cincinnati	(1872)	89	2
University of Nebraska	(1905)	81	1, 62
Central Med Coll St. Joseph	(1905)	64	3
Kansas City Homeo Med. Coll	(1904)	68	2

Pennsylvania Medical Examiners Appointed—Governor Pennypacker has appointed the following men members of the State Medical Examining Board. Dr Francis R. Packard, Philadelphia, editor of the *American Journal of Medical Sciences*, is appointed to take the place of the late Dr Hiram McConnell, New Brighton. Dr Henry Beates, Jr, Philadelphia, was reappointed. Dr W O Keffler, Altoona, and Dr S J H. Louthier, Somerset, were appointed in the places of Dr C W Ewing, Harrisburg, and Dr L P O'Neal, Mechanicsburg. The following men were appointed by Governor Pennypacker on the Homeopathic Medical Examining Board. Gustave A Mueller, Allegheny, C S Middleton, Philadelphia, H M Bunting, Norristown.

Pennsylvania December Regular Report—The State Medical Society of Pennsylvania reports the written examination, held at Philadelphia and Pittsburg, Dec 12-15, 1905. The total number of applicants examined was 107, of whom 77 passed and 30 failed. The following colleges were represented:

College	PASSED	Year Grad	Per Cent
Jefferson Med. Coll (1904)	75	80 0, 86 2	(1905) 76 5
78 7 79 7 81 2 81 8 82 7 84 3 85 1			
Medico-Chirurgical Coll Philadelphia (1898)	89 5	(1902) 83 6	
(1903) 82 9 (1904) 75, (1905) 75	76 7, 77 4	77 8	78 2
78 6 80			
Woman's Med Coll Philadelphia (1903)	80,	(1905) 78	
Howard University (1902)	80 5	(1904) 81 5,	(1905) 75 5
University of Edinburgh (1905)			78 8
University of Florence Italy (1899)			75
University of Kentucky (1905)			77 1
Western University of London Canada (1905)			78 4
College of P and S Baltimore (1904)	77 5	(1905) 75	75 1
University of Pennsylvania, (1883)	89 7	(1902) 81 5	(1903) 78 9
80 7 82 8 (1904) 70 2, 81 6, 82 9, 83 8	87 6	(1905) 87 6	
78 9 87 8 88 2			
Eclectic Med Inst. Cincinnati (1880)			77 5
Johns Hopkins University (1902)	84 2	(1905) 87 9	
University of Louisville (1894)			85 4
University of Maryland (1903)	77 3	(1905) 78 5	
Harvard Med Coll (1902)	88 9	(1903) 80 5	
Kentucky School of Med (1905)			75 1
Baltimore University (1901)			75 2
University of Virginia (1904)			78
Georgetown University Washington (1899)			84 3
Western Pennsylvania Med. Coll (1904)	78 9	(1905) 76 4	80 2
University of Naples, Italy (1898)	77 2	(1901) 78	(1902) 75
Baltimore Med Coll (1903)	77 2	(1905) 76 6	70 5
University of Ohio (1893)			78 2
University of Tennessee (1903)			76 3
University and Bellevue Hosp Med. Coll (1904)			84 7
Columbian University (1901)			84 7
University of the South (1904)			77 3
Medical College of Virginia (1905)			82 3
University of Cincinnati (1905)			75

College	PASSED	Year Grad	Per Cent
Medico-Chirurgical College Philadelphia (1903)	65	(1904) 47 9	
(1905) 64 4 70 72 1			
Louisville Med. Coll (1905)			72 8
University of the South (1903)	71,	(1904) 72 3,	73 7
Rush Med Coll (1904)			72 4
Coll of P and S Baltimore (1905)	60 6	71 6 71 9	
Maryland Med Coll (1903)	66	(1905) 52 4, 61 1	
Howard University (1905)			58 7
Ohio Med. University (1905)			65 5
Western Pennsylvania Med. Coll (1904)	68	71 6	(1905) 68 7
Starling Med Coll (1908)			71 1
University of Turin Italy (1896)			68 4
University of Kentucky			71 6
George Washington University (1902)			71 7
Jefferson Med. Coll (1905)	71 1,	71 7	
National University (1897)			67 8
Kentucky School of Med. (1904)			41 2
Baltimore University (1904)			73 4

* Year of graduation not given

Pennsylvania Homeopathic Report for December—The Homeopathic Medical Society of Pennsylvania reports the written examination held at Philadelphia, Dec 12 15, 1905.

The total number of applicants examined was 10, all of whom passed. The following colleges were represented:

College	Year Grad	Per Cent
Hahnemann Med Coll., Philadelphia (1905)	80.8	88.5
University of Wooster (1897)		82.4
Boston University (1902)		80.8
New York Homeo Med Coll (1899)		95.4

Pennsylvania Eclectic Report for December—The Eclectic Medical Society of Pennsylvania reports the written examination held at Harrisburg, Dec 12 15, 1905. The total number of applicants examined was 8, all of whom passed. The following colleges were represented:

College	Year Grad	Per Cent
Maryland Med Coll (1905)		88.4
Royal University Palermo (1900)		75
American Coll of Med and Surg (1903)		88.1
University of the South (1900)		78.3
College of P and S Baltimore (1904)		84.9
Western Pennsylvania Med Coll (1906)		83.3
University of Modena Italy (1903)		78.0
University of Naples Italy (1894)		78.8

Utah January Report—Dr R W Fisher, secretary of the State Board of Medical Examiners of Utah, reports the written examination held at Salt Lake City, January, 1906. The number of subjects examined in was 19, total number of questions asked, 80, percentage required to pass, 75. The total number of candidates examined was 3, all of whom passed. The following colleges were represented:

College	Year Grad	Per Cent
University of Michigan (1904)		79.7
Marion Sims Beaumont Med Coll (1904)		70.5
Jefferson Med Coll (1904)		84.2

Virginia, New Board of Medical Examiners—The governor has appointed the following members of the State Board of Medical Examiners to serve for four years: Drs Willard B Robinson, Tappahannock, Herbert M Nash, Norfolk, Junius E Warrinner, Brook Hill, William W Wilkinson, La Crosse, Richard S Martin, Stuart, Samuel Lile, Lynchburg, Robert C Randolph, Boyce, Robert M Slaughter, Theological Seminary, Elliott T Brady Abingdon, and Charles W Rodgers, Staunton, and state at large, Drs Rawley W Martin, Lynchburg, A S Priddy, Bristol, and R Bruce James, Danville.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Boston, June 5 8

Medical Association of the District of Columbia, Washington, April 3

Tennessee State Medical Association, Memphis, April 10

Medical Association of the State of Alabama, Birmingham, April 17

Medical Society of the State of California, San Francisco, April 17-19

Medical Association of the District of Columbia, Washington, April 3

Florida Medical Association Gainesville, April 18

Medical Association of Georgia, Augusta, April 18

Mississippi State Medical Association, Jackson, April 18

South Carolina Medical Association, Columbia April 18

State Medical Association of Texas Fort Worth April 24 26

Arizona Medical Association, Phoenix April 24 25

Medical and Chirurgical Faculty of Maryland Baltimore, April 24 26

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Regular Meeting of the Section on General Medicine, held Feb 12, 1906

DR WILLIAM E HUGHES in the Chair

Chronic Valvular Disease

DR FREDERICK J KATZNER exhibited a patient whose case was interesting on account of the sudden onset of the symptoms, the very loud diastolic murmur which could be heard over the entire trunk and often three feet away from the body, and the very slight arterial phenomena. Following the ingestion of a large quantity of beer one of the heart valves ruptured.

DISCUSSION

DR J ALISON SCOTT said that it was unusual for rupture of a valve to occur, except under great muscular strain. In this case the increased blood tension probably was produced by the alcohol.

DR JAMES M ANDERS said that rupture of normal heart valves was not frequent, and that it would be interesting to know whether or not the man had had a previous valvular lesion. Under those circumstances rupture would be more likely to occur, and in two instances in his experience had occurred, on slight muscular exertion.

DR WILLIAM E ROBERTSON said that in his experiments in the taking of blood pressure he had found that a good dose of alcohol would bring about a lowering of the blood pressure. In one instance in which the blood pressure was 115 it fell to 95 in twenty minutes after the giving of an ounce and a half of alcohol. He thought it possible that in this instance the enormous amount of fluid taken would increase the blood pressure and in that way throw extra work on the heart. In myocardial conditions the blood pressure is often very high when it would be supposed to be low. He believes that some other factor than the muscular pressure itself accounts for these variations in tension. This he thinks is explained by the retention of poisons in the system which have a vasoconstrictive effect.

Hysterical Spasms of the Stomach

DR J HENDRIE LLOYD exhibited a patient with a rare and curious hysterical condition of the stomach and abdomen. It was somewhat like the disease noted by French authors called "Rhythmical Borborygmi." The patient, who was hysterical, has a loud rumbling to and fro sound in the abdomen, probably caused by the passage of air to and fro either in the stomach or transverse colon, and this is produced by a rhythmical movement of the abdominal muscles. The condition came on during convalescence from typhoid, was unattended by pain, nausea or any evidence of organic disease. Dr Lloyd reviewed briefly some of the more important and rare hysterical conditions of the abdominal organs, among which especially were anorexia nervosa and hysterical merycism, or chewing of the cud in the human subject, a condition which has been observed especially in neurotics, as in insane patients, idiotic and epileptic children, etc, and also in neurasthenics. Among other diseases referred to was phantom tumors, false pregnancies, so called, all of which are seen some times in hysterical subjects. The paper emphasized the fact that there is still a wide field for the purely medical clinician in diseases of the stomach, all of which diseases the physician is not yet ready to resign to the surgeon.

DISCUSSION

DR JAMES M ANDERS believed the case could not be anything else than a neurosis. Tending to this opinion were the facts of the typically hysterical appearance of the patient, and that when breathing and the motion of the diaphragm were arrested the noise ceased. It was evidently not due, therefore, to an independent peristaltic action of the stomach. That the diaphragm should make the peculiar noise in a normal stomach was difficult of explanation. An hour glass contraction of the stomach was suggested as an explanation. It was thought possible that the diaphragm in forcing air and fluid through a narrow opening caused some noise, and, naturally, with retraction of the diaphragm and relaxation of the stomach there would be a regurgitation into the cardiac end.

DR J ALISON SCOTT thought that from the character of the noise there must be both air and fluid concerned in the noise. He suggested the existence of a partial obstruction at the pyloric end of the stomach, or along the curvature of the stomach. He thought either possibility could be easily demonstrated by an inflation of the stomach.

DR A O J KELLY said the case appeared to be some stomach condition in a hysterical subject. He referred to a patient who had been subjected to abdominal operations and had, following the third, developed a stomach condition manifested by air regurgitation, and vomiting coming on two, three or more times daily. She had been under various treatments and ultimately was operated on on the supposition of the presence of adhesions near the pylorus. These were found, and with their removal the regurgitation of food ceased promptly.

DR S SOLIS COHEN thought that there seemed to be a large hysterical element in association with the respiratory tract rather than with the stomach. He thought it would be of

interest to know whether with the passage of stomach tube there was any escape of gas. In an hour glass stomach which he had seen there had been contraction in an unusual direction, and he wondered whether there could be such a condition in the present case. Personally, he did not believe the condition was a surgical one, although he was open to conviction in that direction if the skiagraph should show a lesion.

Dr WILLIAM E. HUGHES said that he had occasionally seen, and especially in neurotics, stomachs whose esophageal opening was normally placed, whose pylorus was where it ought to be, and yet, without any actual increase in the size of the stomach, the lower border was almost down in the pelvis, necessitating a short, sharp bending of the stomach on itself. He thinks it possible that the motion occasioned by the sharply descending diaphragm might be enough to produce such a sound.

In any of the hysterical conditions there should be considered the possibility of cure by operation, and in connection with this two elements must be borne in mind—a hysterical basis and an acquired habit. If by operation the habit can be broken up, the hysteria is at least cured temporarily. A fact too often lost sight of is that there is an anatomic or pathologic basis for hysterical manifestations, such as there was in Dr Kell's case. In a certain number of gastric cases there is absolutely no neurosis. A case in point is that of a man over 80 years of age who had for many years regurgitated his food. He was entirely free from neurosis, and in his case the condition was purely the result of habit.

Pulmonary Abscess.

Dr. JAMES M. ANDERS AND Dr. GEORGE E. PFAHLER presented a man, aged 28, married, an engineer, whose present illness began as typical typhoid fever, the temperature through out, however, pursuing an intermittent type. At the end of the third week phlebitis affecting the left femoral vein developed and subsided that week. Then a bronchopneumonia appeared and after running its course, the patient developed a lobar pneumonia. Physical examination revealed an area of muffled tympany and cavernous breathing at the angle of the right scapula posteriorly. The abscess cavity attained its maximum size in about seventy-two hours. Three days later, while the patient was sitting up for an examination he developed a severe paroxysm of cough attended with the expectoration of about two ounces of yellow purulent sputum. A microscopic examination showed pus cells, elastic fibers, pneumococci and streptococci. The process was studied by radiograph while the patient was in the supine position and the exposure was made after inspiration. This showed an incomplete consolidation of the right lower lobe with a cavity in its upper portion about two inches in diameter, extending from the upper border of the fifth rib posteriorly to the middle of the second interspace in the mid scapular line. About ten days later the radiograph showed less evidence of consolidation, the abscess cavity was still of the same size. Eleven days later the cavity was still visible, but was decreased to about its original size, while on the same side the diaphragm had risen to the lower border of the seventh rib. The fact that the diaphragm moved its position upward as compared with its normal position was considered indicative of Nature's process of assisting mechanically in closing an abscess cavity of the lungs. Operative interference had been seriously considered when the fortunate accident occurred leading to the discharge of the pus through a bronchus. After this the general and local symptoms steadily subsided until the necessity for operation no longer existed and convalescence was gradually established.

Recent Therapeutic Experiences with Pneumonia

Dr. S. SOLIS COHEN recently tested in a selected case the value of enormous doses of quinin in pneumonia. The patient was a young robust man admitted to the hospital shortly after his initial chill, still showing some crepitant râles, with bronchial breathing and temperature of about 103. Dr. Cohen gave him 15 grains of quinin every two hours, with the direction that it be continued until there was some sign of quinin poisoning. The man took 105 grains without effect, except a reduction of temperature. In the course of thirty

six hours he was found to be in good condition, with the physical signs increased, but the fever gone. The pulse was very quiet, the breathing easy and the patient was feeling comfortable. The quinin was continued, in doses of about 50 grains a day, for two or three days, at the end of which time the physical signs began to show a beginning of resolution and the patient went on to recovery, without a crisis. There had been a gradual fall of temperature from 103 to normal.

Dr. Cohen also reported his results in the employment of colloidal silver in the treatment of endocarditis and in associated forms of sepsis. In a case of bronchopneumonia in a child, with pronounced meningeal symptoms, the remedy was used by the rectum and afterward applied in ointment over the neck, giving relief to the patient. In a case of lobar pneumonia following bronchopneumonia recovery took place. In that case also the symptomatic recovery preceded the disappearance of the physical signs. Dr. Cohen is convinced of the great value, in the treatment of pneumonia, of keeping the windows of the room in which the patient is sleeping open all the time, the bed being protected from the draft. An advantage in the administration of the colloidal silver is that as it is not given by the stomach, it need not interfere with other treatment.

Dr. Cohen does not know the action of the colloidal silver, but ventured the opinion that it renders the tissues less favorable as a culture medium, and that, to a degree, it favors the destruction of toxins. The dose usually employed by him by the rectum is from 2 to 5 grains, or the solution of from 2 to 5 grains in from one half to 2 ounces of water. For intravenous use care should be taken to secure a specimen which has been well cared for by the apothecary. In pneumonia he has used the silver in suppositories containing 30 minims of a 2 per cent solution.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Acute Catarrhal Conjunctivitis

In the treatment of acute catarrhal conjunctivitis, according to J. H. Kincaid in *Southern Jour. of Med. and Surgery*, cleanliness is of the greatest importance. The eyes should be thoroughly cleansed every hour or even more frequently if much discharge is present. This should be done with a saturated solution of boric acid (4 per cent).

Cold compresses applied locally are of service, unless a corneal ulcer is present. Especially is cold of value when there is much swelling of the lids. A small ice bag may be used instead of the compresses. Kincaid states that some authors recommend silver nitrate in the strength of 2 to 5 grains (12-30) to the ounce (30), applied locally to the everted lids.

The eyes should never be bandaged, nor should poultices be applied to them. The patient should not be allowed to use the eyes and should wear dark glasses as a protection from the light, wind and dust. Temperate habits and proper hygiene must be insisted on by the physician.

Earache.

As soon as a patient complains of a severe earache, according to Bards in *Med. Record*, it must be realized that a septic process is present, which may reach a dangerous state if left unchecked. The patient, therefore, should be kept quiet, put to bed and placed on a liquid diet. The bowels must be kept freely open. Opium may be given, if necessary, to insure rest and comfort, but should be used with caution. Dry heat or an ice bag should be applied to the ear. Heat, as a rule, is preferable to the patient. Every three hours the ear should be irrigated gently with a hot solution of bichlorid of mercury in strength of 1 to 5,000, followed by a few drops of a carbolic acid solution in glycerin instilled into the ear.

Bearsley condemns the practice of applying an onion, an oil or a tincture to the external meatus as being uncleanly and in many cases harmful. Under no circumstances should the patient be allowed to suffer longer than twenty-four hours, and if the pain continues and the drumhead is swollen, in failed and distended surgical procedures should be resorted to without delay. The drumhead should be thoroughly incised and treated in the same way as any other septic formation. When the tympanic membrane is incised freely and not simply punctured instant relief is given the patient, dangerous complications are prevented and recovery is hastened. The author recommends a hypodermic injection of morphin or a whiff of chloroform or nitrous oxid, when the drum may be freely incised with but little pain. In all cases, symptoms of extension to the mastoid cells must be watched for. The symptoms of mastoid involvement are tenderness over the mastoid region and sagging of the posterior superior wall of the canal.

Edema of Glottis in Children

The following combination is recommended by *Bull gen de Ther* as a spray to relieve the edema of the glottis in children and infants.

R	Alumina		
	Acidi trimeci, ññ	gr ʒi	1
	Ext kramerie	ʒss	2
	Aque	ʒiiss	105

M Sig To be used in the atomizer as a spray to the throat five or six times a day

Chapped Hands

The following combination is recommended as a valuable local remedy in the treatment of chapped hands.

R	Sodu salicylatis	ʒi	4
	Balsami peruviani	ʒiv	15
	Glycerini	ʒiss	45
	Aque rose	ʒii	180

M Ft lotio Sig To be applied to the hands night and morning

Hydrocyanic Acid

Hydrocyanic acid is an old time preparation, used as an antispasmodic in the various forms of reflex vomiting. It has also been used in many other conditions of nervous origin such as the cough due to disturbances of the heart and in asthma. It is a most efficient sedative to the gastric mucous membrane in such conditions as gastralgia, ulcer and carcinoma, and is regarded as a satisfactory sedative in cases of pruritus. Bearsley recommends the following combinations containing dilute hydrocyanic acid.

In dry irritable coughs

R	Acidi hydrocyanici dil	m iii	20
	Vini ipecacuanhæ	m v	30
	Syr, toluani	ʒss	2
	Aque anisi q s ad	ʒii	8

M Sig To be taken at one dose, the dose to be repeated every four hours

In gastric irritability

R	Acidi hydrocyanici dil	m iii	20
	Liquoris bismuthi	ʒss	2
	Sodu bicarb	gr ʒx	130
	Liq morphine acetatis (1 p c)		
	Spts chloroformi, ññ	m viii	50
	Aque menth pip q s ad	ʒi	30

M Sig One such dose every four hours

To allay vomiting, the following combination is useful

R	Acidi hydrocyanici dil	m iv	25
	Potassu bicarb	gr ʒx	130
	Spts ammon arom	m ʒv	1
	Liquoris bismuthi	ʒss	2
	Aque chloroformi q s ad	ʒi	30

In pruritus, the following is of value

R	Acidi hydrocyanici dil	ʒi	4
	Liquoris plumbi dil q s ad	ʒviii	240

M Ft lotio Sig Apply locally to allay the itching on the unbroken skin Or

R	Acidi hydrocyanici	ʒss	2
	Liq plumbi fort	ʒi	4
	Acidi carbolici liq	m v	30
	Aque q s ad	ʒii	60

M Ft lotio Sig To be painted thinly over the irritable parts where the skin is unbroken
[The foregoing should not be applied on mucous membranes nor on broken skin]

In laryngismus stridulus

R	Acidi hydrocyanici dil	m i	100
	Spts ammon arom	m viii	50
	Tinct hyosejami	m iv	25
	Syr auranti	m ʒv	1
	Aque anisi q s ad	ʒii	8

M Sig One such dose every four hours

In spasmodic asthma

R	Acidi hydrocyanici dil	m iv	20
	Creosoli	m i	106
	Mucil acacie	ʒss	2
	Aque cinnamomi q s ad	ʒiv	15

M Sig One tablespoonful at once and repeat the dose at the end of an hour if not relieved

In gastralgia with vomiting

R	Acidi hydrocyanici dil	m iii	20
	Creosoli	m i	106
	Liq morph hydrochlor (1 p c B P)	m ʒv	130
	Sodu bicarb		
	Mucil, acacie, ññ	ʒss	2
	Aque dest q s ad	ʒi	30

M Sig Two tablespoonfuls at a dose and repeat in four hours if necessary

Urem with Coma

The following outline of treatment is recommended by H J Smith in *Med Bull* in the treatment of uremic coma. When the heart's action is feeble and accompanied by high arterial tension, nitroglycerin may be given hypodermically in doses of grain 1/100 (0006), alternating with strychnia given in doses of grain 1/40 (0015) each. The patient is placed in a hot pack and cold applied to the head. In conjunction with the hot pack, pilocarpin hydrochlorate may be given hypodermically in doses of grain 1/12 (005) each to promote free diaphoresis and thus to aid in eliminating large amounts of urea.

Magnesium sulphate, 2 ounces (60), given by rectum in a pint of warm water and the injection repeated several times, is recommended in order to withdraw large amounts of the serum from the system and thus to reduce arterial tension and to restore consciousness.

The duration of the hot pack must depend on the individual case, lasting from a few minutes to thirty-five or forty minutes, at the end of which time the heart should be observed and stimulants administered if necessary. Elaterin is of service at this stage of the treatment to promote free elimination by the bowels. It is given in doses of grain 1/8 (008) each, together with large quantities of water if the patient regains consciousness.

As a diuretic the following combination is recommended

R	Potassu acetatis	ʒiv	15
	Infusi digitalis		
	Infusi buchii, ññ	ʒvi	180

M Sig One tablespoonful every three hours Or

R	Hydrargyri chloridi mitis		
	Pulveris scillæ		
	Pulveris digitalis, ññ	gr ʒx	130

M Ft pillule No xx Sig One every four hours, and continue for one week

AFTER-TREATMENT

The after-treatment consists in giving a saline purge once or twice a week to assist in reducing the edema. For the high arterial tension spiritus glonoini is recommended, given in doses of 1 minim each (06), three times a day. This may also relieve dyspnea if this is present.

To correct the anemia and to serve as a mild diuretic, Smith recommends liquor ferri et ammonii acetatis in doses to suit the individual case, and continued for several weeks. The diet during the active stage of the trouble should consist principally of milk and broths. After the acute symptoms have subsided lean meats may be allowed such as beef, mutton, lamb, broiled, roasted or stewed, well cooked fish, green vegetables and stewed fruits.

Chronic X-Ray Burns

In THE JOURNAL, March 10, 1906, we stated that Mr Fuchs, a former x ray operator, had used silver nitrate in full strength in chronic x ray burns, with good results. This was an error, we should have stated that he had used C P nitric acid full strength

Medicolegal

Actualty of Mental Suffering Attendant on Physical.

The Supreme Court of Florida, Division A, says, in *Western Union Telegraph Company vs Wells*, that the intimate association between mind and body is a matter for discussion among psycho physiologists, but to the laymen it is clear that a tribunal that allows damages for physical suffering can not deny damages for the mental suffering attendant on the physical. The one is as much an actualty as the other, and just as readily determinable by a jury

Demonstration Before Jury of Nature of Injuries.

The Court of Civil Appeals of Texas says that during the trial of *Missouri, Kansas & Texas Railway Company of Texas vs Lynch*, a personal injury case brought by the latter party, while a physician, the plaintiff's witness, was on the witness stand, the plaintiff's counsel had the plaintiff go around in front of the jury, take off his shoes and socks, and pull up his trousers and underwear, so as to expose his limbs above the knees, and then requested the physician to show the jury and demonstrate the plaintiff's sensibility or lack of sensibility his limbs. The witness then proceeded as follows: "As I said a while ago, he has a loss of sensation. His feet stay cold all the time. There is no feeling down here. You can pinch it as deep as you want to, and it don't make any difference. There is no sensation whatever. [Here the witness stuck pins into the plaintiff's limbs in various places, and continued the process until the blood was running freely from one place in one limb.] You can light a match there and burn him, if you want. The other is the same as this one [continuing to prick the other limb]. However, the left is a little better leg than the other. He seems to sort of bring it up from the hip and brace himself on it, so he can walk on his crutches. If it wasn't, he could not walk on his crutches." Then (turning to the jury) "If you would like for me to, I will stick a match under it. He won't have any pain about it at all. It will make a blister, of course." And, while said witness was on the stand, the plaintiff's counsel had the plaintiff to stand up in front of the jury, and requested the witness to remove his crutches. The witness then proceeded to take one crutch from under the plaintiff, leaving the plaintiff standing on the other, and then forcibly removed the latter, allowing the plaintiff to fall nearly to the floor, whereupon the witness, who was a very strong man, caught the plaintiff, raised him up, stood him erect, and then turned him loose and let him fall again, this time, as before, catching him just before he struck the floor. To these proceedings the defendant company objected, on the ground that they were improper and calculated to prejudice the minds of the jury. The objection was overruled and the evidence admitted. The court holds that the evidence was admissible as tending to show the nature and extent of the plaintiff's injuries. It says that this evidence could only have affected the amount of the recovery, and, as there was no complaint made that the verdict (for \$12,500) was excessive the defendant could not have been harmed by its admission. The court also holds that there was no error in admitting the testimony of another physician that in his opinion, from all the history given him of the case and from what he saw about the plaintiff, and the length of time that had elapsed since the injury, it would indicate more the idea of permanency in his condition than not. It says that the witness was a medical expert, and could give his opinion, based on his examination and the history of the case received from the plaintiff. The defendant could, on cross examination of the witness, have shown that the history of the case received by the witness from the plaintiff was not correct.

Application of Illinois Medical Practice Act

The Supreme Court of Illinois in the case of *People vs Langdon*, wherein it denied a rehearing in February, reverses the decision of the Appellate and Circuit courts. This was an action to recover the penalty for practicing medicine without a license from the State Board of Health, imposed by section 9 of the act in force July 1, 1899, entitled, "An act to regulate the practice of medicine in the state of Illinois, and to repeal an act therein named." The dates of the violations of the act charged were in 1903, without any averment that the defendant began the practice of medicine after July 1, 1899, and it was contended that without that averment no cause of action was stated. Thus the question raised was whether a person who has no license to practice medicine, who began such practice before July 1, 1899, when the present act took effect, and continued such practice thereafter without a license, is subject to the penalties named in section 9.

The Supreme Court says that it is clear that such a person comes within the express language of that section. He is a person who is practicing medicine without a certificate issued by the State Board of Health in compliance with the provisions of the act, and who does not hold an unrevoked certificate from the State Board of Health issued prior to the taking effect of the act. Having no license at all to practice medicine, he is within the terms of the statute and subject to its penalties.

But counsel contended that because section 2 only provided for the granting of licenses to persons entering on the practice of medicine after July 1, 1899, when the act took effect, the only persons subject to the penalties imposed by section 9 were those who began the practice after that date. The Supreme Court, however, does not see how that position can be maintained. It says that the provision of section 2 relied on is as follows: "No person shall hereafter begin the practice of medicine or any of the branches thereof, or midwifery, in this state without first applying for and obtaining a license from the State Board of Health to do so." Taking that section and the other provisions of the act together, they amount to this: Any person desiring to enter on the practice of medicine after the act took effect could only do so after first applying for and obtaining a license from the State Board of Health in compliance with the provisions of the act, and any person practicing medicine without a certificate issued under said act, or an unrevoked certificate issued under previous acts, was subject to certain penalties specified in section 9. The act is penal in character, and is to be strictly construed, but not with such technicality as to defeat its purpose. When the true meaning and intent of the act are apparent, the act is to be given effect in accordance therewith. The proviso excluding persons practicing medicine who hold unrevoked licenses issued by the State Board of Health prior to the taking effect of the present act can not be ignored in interpreting the act, and the proviso would be useless and senseless, if the legislature intended the act to apply only to persons who began the practice of medicine after the act took effect. To say that the legislature intended to grant immunity from prosecution to persons who were unlawfully practicing medicine at the time the act took effect would be wholly unwarranted. On the contrary, an unrevoked license or certificate issued under some previous act was required by the proviso.

In the case of *State Board of Health vs Ross*, 191 Ill 87, the question whether the State Board of Health could revoke certificates issued under a previous act was considered, and it was held that it could not. That decision was in accordance with the language of the act which provided for issuing licenses, and in one sentence provided that the board might refuse to issue a license for certain reasons, and might revoke such license for like causes. The provisions for granting, refusing to grant, or revoking a license under the present act relate only to persons entering on the practice of medicine after the act took effect. But that is an entirely different proposition from the one involved in this case. It does not follow from that decision that one who has no license under the present act or any former act may practice medicine without being subject to the penalties prescribed by section 9.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Medicine, Philadelphia March 10

- 1 *Experimental Method in Sanitary Science and Sanitary Administration W F Sedgwick Boston
- 2 *Review of Recent Observations on Treponema Pallidum of Syphilis C A Pfender Washington D C
- 3 *Litholapaxy vs Lithotomy G K Swinburne New York
- 4 The Outlook for the Chronic Dyspeptic M I Knapp New York
- 5 *Appendicitis When to Operate S I Sanderson Detroit Mich
- 6 *Life Insurance Companies and the Prevention of Tuberculosis C L Greene St Paul Minn

1 Sanitary Science and Administration—Sedgwick states that comparatively few physicians or sanitarians are in a position to conduct artificial experiments but that almost any wide awake observer, whether he be a physician physiologist, sanitarian or engineer may, if he will find going on all about him natural experiments, the conditions of which may often be learned with great accuracy even after the experiment is completed and which may yield conclusions quite as capable of verification as are those of experiments made in the laboratory. He pleads for better material on boards of health, claiming that it is time we should cease experimenting with political appointees and begin experimenting with something better than spoilsmen. Too often a hack politician or two, a second rate physician or two, and one or more vain or place seeking nobodies—useless but not harmless—make up local boards of health, and as no stream can rise higher than its source the services of such boards are disgracefully small in quantity and poor in quality.

2 Treponema Pallidum of Syphilis—Pfender states that under the international code the present correct name of the organism now almost universally conceded to be the etiologic factor in the production of syphilis is *Treponema pallidum*.

3 Litholapaxy vs Lithotomy—Swinburne pleads for the more frequent use of litholapaxy, an operation too valuable to be lost. The technic is described and several cases are reported illustrative of the uses and limitations of the operation.

5 Appendicitis, When to Operate—Sanderson believes that the safest general rule is to operate only when general peritonitis is not present. In regard to late operations, he says that no one questions the advisability of evacuating pus. As to the interval of operation, he says that if the attack has been unquestionably an inflammation of the appendix, especially if after symptoms remain, operation is indicated, but if the symptoms are mild, and clear up entirely after the attack, it is best to await symptoms of an oncoming second attack before operation, in the meantime keeping the patient under observation.

6 Life Insurance and Tuberculosis—Inasmuch as life insurance companies have a vital interest in the prevention of tuberculosis, Greene believes it desirable that the National Association for the Study and Prevention of Tuberculosis should endeavor to bring into active membership the medical directories of life insurance companies and seek to secure the active aid and co operation of the companies in attempts to secure the passage and enforcement of laws directed to control tuberculosis, whether these relate to the building and maintenance of state or national sanatoriums, or to other vital matters. Arrangements ought to be perfected for the issuance of uniform sets of circulars, giving in plain and simple language such information as will serve to educate the masses, such literature to be printed and circulated by the companies through their agents and their ordinary mail service.

Medical Record, New York March 10

- 7 Intracranial Lesions as Sequelae of Chronic Purulent Otitis Media M A Starr, New York
- 8 *Mastoiditis in Infants S Oppenheimer, New York
- 9 Literary Gems from the Medical Essays of Oliver Wendell Holmes L B Blair, Albany, N Y
- 10 *Serum Treatment of Hay Fever C H Knight, New York

- 11 *Human Blood Pressure and Pulse as Affected by Altitude C F Gardiner and H W Hoagland, Colorado Springs Colo
- 12 Insanity Often a Form of Moral Insanity T D Crothers, Hartford, Conn
- 13 Vaginal Section in Relation to Puerperal Sepsis J S Price Beaumont Texas
- 14 *Korsakoff's Disease D L Hunt, New York
- 15 Open Safety Pin Swallowed by an Infant Six Weeks Old and Successfully Passed by Bowel Six Days Later B Van D Hedges, Plainfield N J

8 Mastoiditis in Infants—Oppenheimer gives the history of a patient illustrating the condition in which there is absence of prominent symptoms when the antrum is filled with pus, and declares that undoubtedly many deaths in infants ascribed to other causes result from a purulent inflammation of the mastoid antrum which has been unrecognized. In many cases the only evidence of the ear affection has to be gained from a careful study of the child for several days.

10 Serum Treatment of Hay Fever—Knight sums up the present status of this treatment practically as follows. A final decision as to its value does not, as yet, seem warranted. There are so many discrepancies and sources of error that the problem is not easy to solve. The method of treatment varies greatly with the physician. There is also lack of uniformity in the preparation and use of the serum as well as in the general management of the patient. He thinks that it is fair to require an observance of the ordinary laws of health, even if such special precautions as excluding the night air during sleep, and so on, are not adopted. The strength of the serum and the sources from which it is obtained, as well as care and moderation in its administration, are important points. The writer believes from the mass of experience and literature relating to this subject, that a just estimate of the value of serum will soon be reached. The serum treatment at least does no harm even if it gives no better results than those attained by other methods.

11 Blood Pressure, Pulse and Altitude—Gardiner and Hoagland found a rough ratio between pulse rate and blood pressure, the more rapid the pulse the lower the blood pressure. They also noted that when a pulse rate was but little affected by an altitude of 14,000 feet, the blood pressure was also more constant, and that cases of mountain sickness are accompanied by a fall in blood pressure and a rapid pulse rate. They conclude that patients suffering with high tension are likely to be benefited by being sent to high altitudes, while the change probably would be an undesirable one for patients in whom the blood pressure is abnormally low at sea level.

14 Korsakoff's Disease—Hunt reports four cases. The first was alcoholic plus drugs, the second and third were both uncomplicated alcoholic, the fourth was post typhoidal, and may have been complicated with alcohol. Only the first showed distinct neuritic symptoms, although both the second and fourth patients were weak on their legs, and probably in both the knee jerk was diminished. All except the typhoid patient showed a tremor. All four displayed characteristic and identical mental symptoms—loss of memory for recent events, disorientation as regards time and place, confusion followed by violence and motor restlessness. Two of the four patients recovered, none died, two returned to their excesses, and their cases may practically be considered as chronic.

Boston Medical and Surgical Journal March 8

- 16 Value of Laboratory Methods to the County Practitioner T R Cowan, Danville, Ky
- 17 *Value of Virchow's Smooth Atrophy of the Base of the Tongue in the Diagnosis of Syphilis N B Potter New York
- 18 Demonstration of the Spirochaeta Pallida of Syphilis with Description of Rapid Method of Staining T Y Manahan Boston
- 19 Congenital Occlusion of the Small Intestine Operation Autopsy L Davis and O Richardson, Boston

17 Virchow's Smooth Atrophy of Tongue in Syphilis—As the result of investigations on a large number of patients Potter concludes that a normal base of the tongue is probably of considerable value in excluding an old syphilitic infection whereas, a typical atrophy of the base of the tongue in an individual below fifty points to syphilis. A moderate or slightly marked atrophy of the base of this organ is of little value.

New York Medical Journal

March 10

- 20 Correction of Deformity Resulting from Hip Disease D D Ashley New York.
 21 Sporadic Trichinosis. D Bovard, Jr New York.
 22 Practical Results Accomplished with Radiant Energy S Stern, New York.
 23 Surgical Treatment of Prostatic Enlargement. N Jacobson, Syracuse, N Y.
 24 Determination of the Gastric Area with Special Reference to Transposition of Viscera Hour Glass Stomach, Gastropexia, Etc. A L Benedict Buffalo.
 25 Diarrhea and Its Diagnostic Significance J P Tuttle New York.
 26 *Diagnostic and Prognostic Value of an Examination of the Throat in Pulmonary Tuberculosis W G B Harland Philadelphia.
 27 Peculiar Case of Infantile Palsy of Spinal Origin F Robbins New York.
 28 *Balsam of Peru in Castor Oil as a Surgical Dressing E V Hubbard, New York.

26 Value of Throat Examination in Tuberculosis.—Harland points out the importance of the possible presence of tuberculosis when patients complain of catarrhal symptoms of the upper air tract

27 Infantile Palsy of Spinal Origin.—In the case reported by Robbins, forceps, fillet, hand or pelvis did not form etiological factors A drooping of the right arm was noticed immediately after the birth of the infant. There was never the slightest evidence of voluntary control of the right arm There was no evidence of cerebral implication For experimental rather than for therapeutic purposes, the infant was stretched out at full length on the bed, its arms placed above its head, the middle fingers touching A pull at his feet brought both arms down at once, flexed in the attitude of defense on the chest, both being flexed at the elbow, and then extended to drop along the body This experiment was repeated several times and invariably yielded the same result Robbins thinks it remarkable that exactly that position in which the greatest amount of tension is brought to bear on the fifth and sixth cervical vertebrae should have resulted in a temporary restitution of conductivity in the musculo cutaneous nerve He suggests that possibly the cervical roots of this nerve have only been stretched at their point of emergence from the spine

28 New Surgical Dressing.—Hubbard speaks of a dressing for wounds which was first employed by the late Dr W W Van Arsdale of New York, consisting of a mixture of balsam of Peru (5ss), and castor oil (5i) The combination forms a permanent mixture, moderately antiseptic, always viscous, and always serving the purpose of a dressing that will not harden and that will take up the wound discharges as fast as they are formed Hubbard cites a number of instances in which he made use of this mixture with good results

St. Louis Medical Review

March 3

- 29 *Digital Irritation of the Epiglottis as a Means of Resuscitation After Apparent Death from Asphyxia. W Freudenthal New York

29 Digital Irritation of Epiglottis.—In cases of apparent death from asphyxia Freudenthal introduces the hand into the mouth of the patient until he feels the epiglottis, and then moves the index finger to and fro over this structure Experience has shown him that this is one of the best and easiest means to excite respiration in all such cases Two cases are cited

American Journal of Orthopedic Surgery, Philadelphia.

January

- 30 *Use of Traction in Hip Disease F H Bradford Boston
 31 *Treatment of Hallux Valgus. H A Wilson Philadelphia
 32 Portable Frame for Holding a Patient with a Fracture of the Shaft of the Femur While Plaster of Paris is Applied. F E Peckham, Providence R I
 33 *Multiple Cancellous Exostoses G G Davis Philadelphia.
 23 Case of Sacro-Iliac Disease in a Child, with Operation L W Rrerson Chicago
 35 Congenital Luxation of the Head of the Radius W E. Blodgett Detroit
 36 Spontaneous Fractures with Rickets H O Fels Cleveland

30 Traction in Hip Disease.—Bradford claims that in the treatment of hip disease a force which will counteract muscular spasm and draw the head of the femur away from the acetabulum favors correction the prevention of deformity and more rapid healing of the diseased bone tissue. Traction is not needed during the whole period necessary for the treat-

ment, but only during the stage of active muscular spasm During the ulcerative stage fixation of the joints and strong traction are both needed in the convalescent stage, and limited motion of the joint is not injurious, but protection from violence is essential until the bone tissues have regained their normal strength

31 Treatment of Hallux Valgus.—Wilson's paper deals with the clinical and radiographic conditions found to exist in 77 patients suffering from some form of hallux valgus and a report of four cases showing the results obtained by operation

33 Multiple Cancellous Exostoses.—Davis reports two cases The first patient was a man, aged 53, who when 10 years of age noticed a hard lump on the fourth finger of the right hand at the joint between the proximal and middle phalanges About the same time hard lumps appeared on both humeri above the insertion of the deltoid muscles beneath the insertion of the pectoralis major on the antero internal aspect The lumps were hard, immovable, painless and attained their maximum size in a few months Both forearms then became affected Two years later both knees became involved and the legs became crooked. Later various joints became impaired The condition progressed, gradually involving all the bones The second patient was a child 3 years of age. The affection was noticed when it was about 1 year old It involved the bones of the hand, arm, leg, several of the ribs and the scapulae

The Post-Graduate, New York.

February

- 37 Intussusception of the Intestines, Operation, Recovery T Dunham New York.
 38 Postoperative Case of Tuberculous Kidney G F Morris and F Cabot, Jr., New York.
 39 Case of Perineal Prostatectomy F Cabot, Jr., New York
 40 Chronic Myelitis J Collins, New York.
 41 Forceps Version and Craniotomy G L Brodhead New York
 42 *Simple Clinical Method for the Use of Detection of the Spirochaete Pallida of Syphilis L B Goldhorn New York
 43 Gastroenterostomy and Cholecystenterostomy S Lloyd, New York.
 44 Medical Language A Rose, New York.

42 Simple Method for Detection of Spirochaete Pallida.—Goldhorn describes a method for rendering the spirochete of syphilis so plain and characteristic as to make its differentiation from the ordinary saprophytic spirochetes quite simple The stain is prepared as follows One gram lithium carbonate is dissolved in 200 c.c of water, and 2 grams of medicinal methylene blue are added When completely dissolved the solution is heated on the water bath until a rich polychrome has formed The solution is filtered through cotton One half of this polychrome is carefully acidified with 5 per cent acetic acid until blue litmus paper shows a faint reddish tinge The second half of the polychrome is added and into this corrected dye a weak watery eosin solution of about 0.5 per cent strength is poured until complete precipitation has taken place This point is determined by filtering a sample from time to time till the filtrate is of a pale blue watery color and slightly fluorescent. The mixture is set aside for a day and is then filtered through a double layer of filter paper The precipitate is dried slowly at about 40 C When dried it is dissolved in wood alcohol, making a strong solution, which is permitted to stand for a day, when it is again filtrated To use this dye a sufficient quantity is dropped on an unfixed preparation so as to cover it, after two or three seconds it is poured off and slowly introduced into lean water, the preparation side turned down When washed the preparation is drained and dried in the air The *Spirochaete pallida* is stained a purplish color, which may be changed into a light black or black brown by treating the specimen with Gram's or Lugol's solution

Interstate Medical Journal, St. Louis

February

- 45 *Transfusion W B Dorsett, St. Louis.
 46 Osteitis Deformans M B Clopton St. Louis
 47 Traumatic Diplegia Operation, Benefit W S Deutsch, St. Louis.
 48 Pilemplus of Louvain J V Ball St. Louis
 49 *Two Unusual Cases of Tubal Pregnancy C H Dixon St. Louis

45 Transfusion.—It is Dorsett's practice, after prolonged intra abdominal operations, whether much or little blood has been lost to inject into the rectum from one to two pints of

normal saline solution. In puerperal eclampsia there is no better remedy, in his opinion, than the introduction of normal saline solution into the veins. In these cases he thinks it best always to open a vein for the purpose of lessening the quantity of toxic blood in the circulation and then to supply the quantity removed by normal saline solution, which dilutes the toxins and renders them less potent, and also stimulates glandular excretion. Dorsett cites five cases illustrating the good results following this procedure. His experience with adrenalin in conjunction with normal saline solution is limited to one case. He thinks it is valuable as an adjunct because by its action the vasomotors are held in check and the intravenous saline solution equalizes the circulation. He warns against injecting too large quantities into the veins for fear of rupture of the vessels or fatal edema of the lungs.

19 Unusual Cases of Tubal Pregnancy—Dixon cites two cases. The first patient, a multipara, menstruated regularly from May, 1902, till September, 1904, which period she missed. On September 14 she noticed a slight flow of blood which commenced with a severe pain lasting a few hours, starting in the region of the rectum and extending toward the stomach, accompanied by nausea. Eight days later she had a similar attack, only more severe. Two days later the pain was general over the abdominal cavity. There was muscular rigidity over the right inguinal region, flatness on percussion and some soreness. Vaginal examination showed a large swelling, soft and painful, on the right side, extending posteriorly. September 26 the patient had another attack of pain, more severe than the preceding ones, but of same character and location. She had been removed to the hospital the day before operation, and a few hours later the cavity was full of blood, the bleeding being from the right tube. Recovery was uninterrupted.

She menstruated regularly until May 22, 1905, when she had an attack of pain, paroxysmal in character, in the left side. She had none of the usual symptoms of pregnancy. A flow had existed since April 13. Examination showed a large swelling in the left pelvic region, pointing downward, painful and soft, with the uterus slightly enlarged. Operation showed rupture of the left tube, which was removed. Recovery was uninterrupted. In the case of the second patient the right tube was the one involved. In 15 cases seen by Dixon the pregnancy was always on the right side, except in the one in which there was a secondary pregnancy on the left side. In most of these cases there was rigidity of the muscles over the side of the trouble, which Dixon thinks is a point worth noting, because the absence of the rigidity usually is given as a differential sign between tubal pregnancy and appendicitis.

Iowa Medical Journal, Des Moines

February 15

- 50 *Shall Wholesale Poisoning Be Sanctioned by the People of the United States to the Detriment of the Masses and the Advantage of a Few Privileged Criminals? C F Wahrer, Ft Madison
- 51 To Spread Sound Ideas Is to Work for Humanity J R Helmsky, Cedar Rapids
- 52 *Case of Poisoning by Oil of Tansy H A Leipziger, Burlington

50 Shall Wholesale Poisoning Be Sanctioned?—Speaking of pure foods and the "patent-medicine" evil, Wahrer states that wholesale poisoning is being done all the time for the purpose of enriching a few at the expense of the health of the masses, who are asked to consume these poisonous products under the pretense that they are wholesome food. While adulteration does not always work injury to health it does deceive. Adulterations are not always for the purpose of deception, but often for the purpose of cheaply preserving articles from decay, so that they may easily be kept for an indefinite time without loss to the maker or the manufacturer. These preservatives, while subserving the ends of the producer, are usually poisonous and detrimental to the health of the consumer. Wahrer discusses the work done by Dr H W Wiley of the Department of Agriculture and details the results obtained. He also speaks of the nostrum evil and the work done by THE JOURNAL, and by the various lay journals and magazines to suppress this evil.

52 Poisoning by Oil of Tansy—Leipziger reports the case of a woman who took one ounce of oil of tansy for the purpose

of producing an abortion. Although she suffered intensely from symptoms of poisoning, she did not abort, but went on to full term, giving birth to a healthy female child.

Denver Medical Times

February

- 53 Presidential Address Delivered Before the Denver County Medical Society W T Rothwell, Denver
- 54 *Treatment of Scarlet Fever N Weist, Denver
- 55 *Id C F Schollenberger Denver
- 56 Id D R Lucy, Denver
- 57 Id A P Grant, Denver
- 58 Bright's Disease as a Gastrointestinal Toxemia P J Polhalske, Denver

54 Treatment of Scarlet Fever—In addition the customary treatment employed, Weist uses the following combination, which has yielded good results in every case.

R	Tinct digitalis (fresh)	3ss	2
	Liq ammon acetat (fresh)	3iss	6
	Spt ether ml	3ii	8
	Syr tolu	3ss	15
	Aqua cari, q s ad	3iii	90

M Sig A teaspoonful every three hours

The dose is varied according to the age or the patient. By giving this mixture from the beginning of the disease, every case, he states, has run an even uncomplicated course.

55 Id—Schollenberger thinks that hydrotherapy is more useful to combat the temperature than medicinal antipyretics. In mild cases in which the temperature ranges from 100 to 102.5 F, and in which there are no heart complications, the following formula has given excellent results.

R	Tinct aconit	gtt	xxxii	2	12
	Antipyrin	gr	xxxii	2	12
	Liq ammonia acetatis		3ss	15	
	Syrupi, q s ad		3ii	60	

M Sig Teaspoonful every four hours for child 6 years old

Therapeutic Gazette, Detroit, Mich

February 15

- 59 *What Is the Best Method of Treating Uterine Inertia?—A Symposium E H Grandin C Jewett, J O Polak, Brooklyn, N Y and W P Manton, Detroit, Mich
- 60 *Present Treatment of Pneumonia as Exemplified by the Routine Treatment of the Disease in Four of the Large New York Hospitals H R Loomis, New York
- 61 *Treatment of Pneumonia S P Johns, North San Juan, Cal
- 62 Therapeutic Value of Eserin in Ophthalmic Practice A. Brav, Philadelphia
- 63 *Backache in Women and Its Treatment W E Parke, Philadelphia
- 64 Brometone in the Control of Epilepsy W Kempster, Milwaukee

59 Treatment of Uterine Inertia—Grandin gives first place to prophylaxis, keeping the nerve centers at par. He advises giving women who possess the characteristics of repressed nerve tone strychnin and quinin during the latter months of pregnancy, in the dosage of gr 1/60 of the former and gr 1 of the latter, three times daily. After the birth of the child the uterus should be given a chance to regain tone before resorting to attempts to deliver the placenta. Other causal factors being absent, Grandin proceeds at once to thorough tamponade of the uterus. On the removal of the gauze, within thirty hours as a rule, the uterus contracts.

Simple inertia in the first stage of labor, with membranes unbroken and patient getting sufficient sleep and nourishment, Jewett does not treat at all, except, perhaps, to eliminate recognized causes. In the presence of indications for prompt delivery he has found the employment of alternate hot and cold compresses over the abdomen most useful. He also administers quinin, in from 5 to 10 grain doses, or strychnin, gr 1/30, every four hours. In inertia in the second stage, the treatment is the same as in the first stage. After full dilatation he resorts to the use of forceps.

When the membranes are unruptured and the pains are irregular, inefficient and powerless, after emptying both bladder and rectum, Polak administers morphin gr 1/4 and atropin, gr 1/150, and makes a firm vaginal tamponade of gauze. When the pains have been strong and regular, and then gradually diminish in force and frequency, he gives strychnin gr 1/30 every half hour until 1/5 gr has been taken. When the inertia follows the delivery of the placenta, fraction, ergot, and uterine tamponade are resorted to.

In the ordinary case of inertia Manton pins his faith to strychnin, quinin, and strong black coffee

60—This article appeared in *Med Rev of Reviews*, abstracted in THE JOURNAL A. M. A., Mar. 17, 1906, page 828

61 Treatment of Pneumonia—Johns favors the use of chloral and infusion of digitalis in the treatment of pneumonia, employed according to the methods described by G. W. Balfour. The dose varies with the age of the patient. For an adult the first dose is 20 grains of chloral in half an ounce of infusion of digitalis. The subsequent doses are 10 grains of chloral in half an ounce of infusion of digitalis, every four hours, to be continued until the temperature falls to normal. Johns has used this treatment for more than ten years in all kinds of cases and has found it equally good in all. [Is not 10 grains of chloral every four hours rather a large dose?—ED.]

63—See abstract in THE JOURNAL, Dec. 23, 1905, page 1070

Archives of Pediatrics, New York February

- 65 *Case of Acute Yellow Atrophy of the Liver in a Child Five Years of Age. A. H. Wentworth Boston
- 66 Plea for the More Timely Use of Intubation in Laryngeal Stenosis and for the Use of Tracheotomy in Certain Neglected Cases. E. W. Saunders St. Louis
- 67 Sclerema Neonatorum. J. P. C. Griffith Philadelphia
- 68 Theory of Natural and Artificial Feeding in Infancy. F. Hamburger Vienna. Translated by H. I. Bowditch Boston
- 69 *Hydrocephalus and Rachitis. Their Treatment of Radiant Energy. M. A. Cleaves, New York

65 Acute Yellow Atrophy in a Child—Wentworth reports a case of acute yellow atrophy occurring in a boy of 5 years. At 18 months the patient had tuberculous peritonitis, from which he recovered without operation in about six months. At the age of 3½ years he had lobar pneumonia of the left lower lobe. The first symptom of the final trouble was a slight jaundice. This was followed in a day or two by vomiting and a slight degree of malaise. The child was about the house and out of doors until within four days of his death. On the sixteenth day of his illness he became delirious. The urine was negative. A diagnosis of the condition was not made during life. When the abdomen was opened at autopsy firm adhesions were found everywhere. The liver was not diminished in size, and the cut surface presented areas of a bright greenish yellow color on a dark red background. The most striking feature of the case was the extreme degree of destruction of liver with the absence of macroscopic signs of atrophy. The liver cells were destroyed in at least three quarters of the liver. The urine had not been examined for leucin and tyrosin.

69 Roentgen Ray in Hydrocephalus and Rachitis—Cleaves reports a case of hydrocephalus in which the patient was exposed to the x ray for five minutes, six inches from the target, biparietal, and treated to an arc light bath, the entire body being exposed to the energy of 10 ampere arcs or a total of 4,000 candle power. During the seven weeks the treatment was continued the child improved in every way. The mental improvement was more marked than the physical. The hydrocephalus also became less apparent in size. The second case was one of hydrocephalus due to rickets. This patient also improved under radiant light treatment.

Ophthalmic Record, Chicago February

- 70 *Triangular Opacity in the Superficial Layers of the Cornea Occurring in Syphilitic Subjects. W. C. Posey, Philadelphia
- 71 *Herpes Zoster Ophthalmicus. E. Stieren, Pittsburgh Pa.
- 72 New Device for Illuminating and Controlling the Intensity of Illumination for the Amblyoscope. N. M. Black, Milwaukee
- 73 Self Checking Speculum. S. S. Bishop, Harrisburg Pa.
- 74 Means of Time Saving when Refracting. H. P. Larkin, Philadelphia
- 75 Foreign Bodies in the Cornea. C. C. Conker, Superior, Wis.
- 76 A Neglected Duty. J. B. Taylor, Bloomington

70 Syphilitic Opacities of the Cornea.—Posey cites the case of a lad of 17 who was the subject of congenital syphilis. During an attack of interstitial keratitis there appeared a triangular opacity in the superficial layers of the cornea which had to be differentiated from certain forms of keratitis parenchymatosa. The opacity was entirely avascular and was composed apparently of a series of fine lines which ran in a generally vertical direction from the base to the apex of the triangle. The rest of the cornea presented the general diffuse

haze and remnants of interstitial vessels which is usual after interstitial keratitis. The second patient presenting this unusual condition of the cornea was a woman 32 years of age, a subject of either late secondary or early tertiary syphilis. In the left eye there was a triangular zone of opacity corresponding in character, position, and extent to that seen in the first case.

71 Herpes Zoster Ophthalmicus—Stieren reports a minimum and a maximum case of this affection. He does not believe in the acute specific hypothesis of the disease, since it never occurred in picemics. In all the cases which have come under his observation he has been able to trace a history of exposure to cold or dampness after some form of unusual exertion, with consequent fatigue, in individuals of sedentary habits.

Texas Medical News, Austin February

- 77 *Creeping Disease. J. D. Moorhead, Desdemona, Texas
- 78 Dermatitis Herpetiformis. J. W. Carhart, Austin
- 79 Cure and Treatment of Tuberculous Throat Affections. C. D. Sinks, El Paso, Texas.

77 Creeping Disease—Under this title Moorhead describes a peculiar skin affection. The patient, a boy 5 years old, was said to be suffering from a Brazilian worm in his foot. The worm disappeared during the winter, only to reappear with the approach of the warm season. The infection was believed to have come from a family which came from Brazil and some of the members of which had their feet infected with this parasite. The worm travels in the layers of epidermis, pursuing rather a zigzag course, giving the skin much the same appearance as the surface markings of moles in the soil. The parasite moves from one half to one inch during the twenty-four hours, usually at night, leaving a raised line of epidermis about one eighth of an inch in width. The only effective treatment of the condition is excision of the progressive end of the line with plenty of tissue included to make sure of getting the parasite. Moorhead has succeeded in destroying the parasite in five cases by freezing the progressive or terminal end of the line with ethyl chlorid, one application being sufficient in each case.

Journal of Kansas Medical Society, Lawrence February

- 80 The Physical Basis of Fatigue. J. M. Latta, Wichita
- 81 *Value of Antiseptics in the Treatment of Infected Wounds. G. M. Gray, Kansas City
- 82 Spinal Injuries with Special Reference to the Mechanical and Operative Treatment. E. F. Robinson, Kansas City

81 Value of Antiseptics—Gray is somewhat skeptical regarding the value of any of the antiseptics in general use in the treatment of infected wounds. He is convinced that both carbolic acid and bichlorid of mercury have been the means of causing death in more cases than they have saved from them. He favors substituting normal salt solution for these more severe agents and basing the treatment on the plan of elimination by evacuation of the pus and provision for drainage instead of persisting in the daily application of strong antiseptic solutions that in his opinion do more harm than good.

Journal of Infectious Diseases, Chicago February

- 83 Observations on the Agglutination of Bacteria. W. H. Park, New York
- 84 Comparative Studies of Diplococci Decolorized by Gram's Method. Obtained from the Spinal Fluid and from the Nares in Cases of Epidemic Cerebrospinal Meningitis. E. K. Dunham, New York
- 85 *Frequent Occurrence of Meningococci in the Nasal Cavities of Meningitis Patients and of Those in Direct Contact with Them. M. E. Goodwin and A. I. von Sholly, New York
- 86 Temporary Alteration of Character of an Organism Belonging to the Colon Group. O. Klotz, Montreal
- 87 Longevity of Bacillus Typhosus in Natural Waters and in Sewage. H. L. Russell and C. A. Fuller, Madison
- 88 Relation Between Oxygen in Water and the Longevity of the Typhoid Bacillus. G. C. Whipple and A. Mayer, Jr., Brooklyn, N. Y.
- 89 Relative Applicability of Current Methods for the Determination of Putrescibility in Sewage Effluents. G. A. Johnson, W. P. Copeland and A. E. Kimberly, Columbus, Ohio
- 90 Comparative Review of Current Methods for the Determination of Organic Matters in Sewage. G. A. Johnson and A. E. Kimberly, Columbus, Ohio
- 91 Method for the Direct Determination of Organic Nitrogen by the Kjeldahl Process. A. E. Kimberly and M. G. Roberts, Columbus, Ohio

- 92 Practical Advantages of the Gooch Crucible in the Determination of the Total and Volatile Suspended Matter in the Sewage A L Kimberly and H B Hommon, Columbus, Ohio
- 93 Resistance to Decomposition of Certain Organic Matters in Sewage H W Clark, Boston
- 94 Collection and Preservation of Samples of Sewage for Analysis S DeM Gage and O O Adams Ithaca N Y
- 95 Ready Method of Preparing a Silica Turbidity Standard H C Levy Richmond Va
- 96 Solubility of Calcium Carbonate and of Magnesium Hydroxide and the Precipitation of These Salts with Lime Water G C Whipple and A Mayer Jr Brooklyn N Y
- 97 Experience with the Use of a Nonbric Alum in Connection with Mechanical Filtration G C Whipple and I F Langley, Brooklyn, N Y
- 98 Use of Copper Sulphate in Water Filtration H W Clark and S DeM Gage Ithaca N Y
- 99 Bacteriologic Action of Copper H W Clark and S DeM Gage Ithaca N Y
- 100 Determination of Copper in Water F B Forbes and G H Pratt
- 101 A Notable Source of Error in Testing Gaseous Disinfectants H W Hill Minneapolis
- 102 Methods of Bacteriologic Examination of Milk J H Slack Boston
- 103 Suggestions for Changes in the Schedules for Making Broth Gelatin and Agar Recommended in the last Report of the Committee on Standard Methods of Water Analysis H W Hill Minneapolis
- 104 Device for Filtering Typhus etc by the Use of Water Pressure H W Hill Minneapolis

95 Occurrence of Meningococci in the Nasal Cavities—Goodwin and Sholly isolated meningococci from the nasal mucus of 50 per cent of meningitis patients during the first two weeks of the disease, and from about 10 per cent of the people most closely in contact with them. They were frequently present in enormous numbers. Two cultures isolated from normal students were like meningococci culturally and in their pathogenicity, but did not have the same specific agglutinins. The authors believe that the finding of meningococci in great numbers in the nasal mucus of a large proportion of the patients and of those caring for them, and the absence of meningococci from the nasal mucus of a large number of normal persons examined, would strongly indicate the necessity of isolating cases of epidemic cerebrospinal meningitis, at least during the early weeks of the disease.

98 Use of Copper Sulphate in Water Filtration—Clark and Gage believe that the treatment of water with copper sulphate or by storing it in copper vessels has little practical value, for the following reasons: 1 The use of any method of sterilization which is not absolutely effective is dangerous in the hands of the general user, tending to induce a feeling of false security, and leading to the neglect of ordinary precautions which would otherwise be employed. 2 The removal of bacteria, *B coli* and *B typhosus*, by allowing water to stand in copper vessels for short periods, while occasionally effective, is not sure, and the time necessary to accomplish complete sterilization is so long that the method would be of no practical value to the ordinary user. Furthermore, metallic copper seems to have little more germicidal power than iron, tin, zinc or aluminum. 3 Although the removal of *B coli* and *B typhosus* is occasionally accomplished by dilute solutions of copper sulphate, these organisms may both live for many weeks in water containing copper sulphate in greater dilutions than 1 to 100,000, and in order to be safe dilutions of 1 to 1,000 must be used, in which case the water becomes repugnant to the user because of its strongly astringent taste. 4 In some instances very dilute solutions of copper sulphate of colloidal copper absorbed from contact with clean metallic copper, appear to have a decidedly invigorating effect on bacterial activity, causing rapid multiplications, when the reverse would have been true had the water been allowed to stand the same length of time without any treatment.

Pennsylvania Medical Journal, Athens
February

- 105 *The Trend of Psychiatry E B Mayer, Pittsburg
- 106 *Protective Inoculations Against Typhoid Fever D H Bergey, Philadelphia
- 107 Typhoid Fever in Pennsylvania S Egbert Philadelphia
- 108 *Herpes Zoster Ophthalmicus E Stieren, Pittsburg
- 109 *The Question of Lowered Gastric Secretion C G Stockton, Buffalo
- 110 *Surgical Treatment of Cardiospasm E Martin Philadelphia
- 111 Treatment of Benign Stenosis of the Pylorus and Duodenum Resulting from Spasm and Scar Tissue and from Abdominal Adhesions A Bernheim, Philadelphia
- 112 Symptomatology and Diagnosis of Cancer of the Stomach J T Gilbride, Philadelphia

- 113 *Gastroenterostomy, Its Indications and Technique W L Rodman, Philadelphia
- 114 *Pain of Obscure Origin Simulating Neuritis Neuralgia or Organic Lesions J H Musser, Philadelphia

105, 106 and 114—See abstracts in THE JOURNAL, Oct 28, 1905, page 1349

108 Id—Oct 21, 1905, page 1271

109, 110 and 113 Id—Nov 4, 1905, page 1439

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

February 24

- 1 *Complications of Scarlet Fever W Hunter
- 2 Whitlow and Its Treatment G B M White
- 3 *Plumbism from the Ingestion of Diachylon as an Abortifacient A Hall and W B Ransom
- 4 *Indications and Contraindications for the Removal of the Gall Bladder A W M Robson
- 5 *Case of Intrahepatic Calculi H R. Vachell and W M Stevens
- 6 Two Cases of Pancreatic Necrosis G Barling
- 7 A Paracolon Bacillus Found in the Urine. W Mair

1 Complications of Scarlet Fever—Hunter records his observations of the relation of oral sepsis in scarlet fever to the complications occurring during that disease. One result stands out very clearly, viz., that the severity of scarlet fever, that is to say of the septic complications of it, is greatly influenced by the degree of oral sepsis present. Thus, of cases without oral sepsis only 35 per cent had complications of moderate or severe degree, whereas of cases with oral sepsis 68 per cent showed such complications. The severity of the initial angina also is affected by the presence of this previous sepsis. Hunter states that the actual frequency of the occurrence of complications of some kind or another is but little affected by the absence or presence of oral sepsis, but that the number of complications met in cases of oral sepsis is much higher than in those without it, and the severity of the complications met with is much greater.

3 Plumbism from Diachylon.—Hall and Ransom show that the custom of taking diachylon as an abortifacient has assumed such serious proportions in England that steps must be taken to stop this evil. They offer the following suggestions as the best method of dealing with the matter: 1 To compel by act of parliament the publication of its ingredients on the cover of every patent remedy. 2 To prosecute and to punish the makers and vendors of diachylon pills. 3 To seek the support of the lay press, and to invite it to abstain from publishing advertisements of "female irregularity" remedies. 4 To circularize, or otherwise to inform, all medical practitioners in the country of the possibility of such a cause in obscure cases of plumbism, so that they may recognize it and warn their patients. 5 Compulsory notification of all cases of abortion. 6 To make lead poisoning in women a notifiable disease. 7 To control, or to prohibit, the sale of diachylon.

4 Removal of Gall Bladder—As the result of his own experience and that of others, Mayo Robson is convinced that there is an undoubted relationship between cholelithiasis and cancer of the gall bladder and ducts. He says that inasmuch as gallstones produce characteristic symptoms and as a rule, therefore, are easily diagnosed, and since they can be removed in the early stages, before serious complications have supervened, with very little risk (less than 1 per cent) in his experience, the preventive treatment for cancer of the gall bladder is removal of the source of irritation. He is so impressed with the importance of this view, that he recommends the early removal of gallstones because the symptoms are likely to recur and lead to other complications. In a considerable percentage of such cases malignant disease is likely to supervene if the irritation is not removed.

5 Intrahepatic Calculi—The patient whose case is related by Vachell Stevens was admitted to the infirmary complaining of jaundice and of painful swelling in the stomach. The liver extended down to within a finger breadth of the umbilicus. The constitutional symptoms were those of jaundice. The

patient became rapidly worse, the jaundice deepened, the hepatic enlargement increased, the stools became colorless and he died in a comatose state on the fourteenth day after admission. The liver weighed 97 ounces and over the whole extent of its surface were small projections caused by underlying calculi. Over the upper surface of the right lobe there were numerous white points which on section proved to be tiny abscesses containing thick pus. Since an attack of typhoid forty one years previously (when 11 years of age) the patient had never been robust, although no symptoms suggestive of gallstones appeared until he was 23 years of age, since which time till his death, twenty nine years later, he had suffered from frequent attacks of colicky pain attributed to dyspepsia. The gall bladder did not contain any stones.

The Lancet, London February 23

- 8 *Gastric Surgery H J Paterson.
- 9 Physical Anthropology and Ethnology of British New Guinea. C G Seligmann
- 10 Oral Sepsis S. Spokes
- 11 *Recurrent Herpes Gestationis C A D Bryan
- 12 Acute Hemorrhage into a Gall Bladder the Seat of Infective Cholecystitis and Hundreds of Gallstones. J A W Pereira and J D Harris.
- 13 *Case of Double Vaginal Cysts H MacNaughton Jones
- 14 An Attempt to Simplify the Diagnosis of Ocular Paralysis W H Haw

8 Gastric Surgery—Paterson reviews the immediate and remote results of gastrojejunostomy, the surgical treatment of gastric ulcer, of gastrorrhagia and of hour glass stomach.

11 Recurrent Herpes Gestationis—Bryan reports a case of this kind occurring in a multipara. There was no history of syphilis. The rash appeared on the arms and consisted of erythema, papules and vesicles. It was irritating and painful. A few patches, without vesication, appeared on the thighs and body. The patient was about five months pregnant. The rash gradually extended over the rest of the body, leaving only the palms and the soles free, though the face was only affected by one or two spots. When the pain and irritation were most severe the forearms became hot and swollen and the vesicles were continually bursting, the fluid from them giving a sensation of scalding to the arms, whilst fresh crops rapidly appeared. These symptoms produced a good deal of insomnia. Treatment was futile. After six weeks of the disease the death of the fetus was diagnosed. The patient was delivered of a dead fetus and the rash gradually disappeared. About ten months later she again became pregnant and the rash reappeared. The eruption was always at its worst when the patient should have had her catamenial period, remaining at its height for about a week and then gradually subsiding, but never disappearing entirely.

13 Double Vaginal Cysts—Jones' patient was a married woman, aged 35 years. She had had no children. In curetting for endometritis Jones found a cystic tumor of the size of a large pigeon's egg in the vaginal vault. Three months later the patient returned complaining of vaginal distress and pain. Low down on the posterior wall of the vagina was another cyst distended with fluid and nearly of the size of the one removed previously.

Journal of Tropical Medicine, London. February 15

- 15 Rhinopharyngitis Mutilans (Destructive Ulcerous Rhinopharyngitis). A Problem in Tropical Pathology J F Leys

Australasian Medical Gazette, Sydney January 20

- 16 Treatment of the Paroxysmal Neuroses. W N Robertson
- 17 Note on Precipitins D A Welsh
- 18 A Case of Bradycardia S Gillies
- 19 Etiology of Dengue Fever T L Bancroft
- 20 *Ectopic Gestation During Lactation R E. Weigall
- 21 Eclampsia During Pregnancy and the Puerperium L R Steele
- 22 Perforating Ulcer of Duodenum Operation Recovery J Harris

20 Ectopic Gestation During Lactation—Six months after the birth of a child, and while the mother was nursing the baby Weigall removed intact a perfect specimen of a tubal pregnancy about three inches in diameter, in the last inch of the tube near the fimbriated extremity. The uterus and tubes appeared to be normal. There were none of the usual symp-

toms of extrauterine pregnancy. The diagnosis was based on the softening of the os uteri and the presence of a rapidly forming tumor.

Annales de l'Institut Pasteur, Paris Last indexed, page 690

- 23 (XX, No 1) Etudes sur les bacilles paratyphiques D Bacquépée and F Chevre
- 24 *Etudes sur la fièvre jaune (yellow fever) E Marchoux and L L Simond
- 25 *L'histologie pathologique de la syphilis héréditaire dans ses rapports avec le *Spirochaeta pallida*. C Levaditi
- 26 Etude du meningocoque P Vansteenberghe and Grysez

24 Report of the French Yellow Fever Commission in Brazil—In this second report Marchoux and Simond explain that the *Stegomyia fasciata* is the only mosquito known which does not die after depositing its first batch of eggs. The female *stegomyia* is able to survive and to lay several batches. This long survival allows the virus of yellow fever time to develop in its body so that it is capable of infecting man. If it died regularly after laying its first batch of eggs—like other mosquitoes—yellow fever would be unknown among human beings. It is possible also, they add, that the virus is adapted to the organism of this special mosquito to the exclusion of all others. Infection of the *stegomyia* by heredity is possible, and a recently extinct focus might be relighted by this means. This fact is important for prophylaxis, although as a rule, infection by inheritance does not seem to play a very prominent part in the spread of yellow fever. The *stegomyia* does not eat the blood from the hemorrhages common during the second phase of yellow fever, nor the fluid of the black vomit nor the dejecta. The mosquito, even in captivity, does not feed on this material unless compelled by starvation. The larvae of the *stegomyia* raised in water containing fresh carcasses of infected mosquitoes do not contract infection, and the adult mosquitoes developing from them have no infecting power. When the infected *Stegomyia fasciata* is kept at a temperature of about 20 C (68 F) it does not seem to possess infecting power. In all their experiences at Rio de Janeiro the members of the commission never succeeded in infecting the *stegomyia* from persons during the incubation stage of yellow fever. The virus of yellow fever can be artificially transmitted from mosquito to mosquito in the laboratory, but probably not under natural conditions. They never succeeded in making several successive passages. They had only a single positive result in numerous experiments in which they tried to induce infection by hereditarily infected mosquitoes. The successful infection realized in this one case also proved to be exceptionally mild, suggesting that possibly the virus may become attenuated by its hereditary transmission.

25 *Spirochaeta Pallida* in Inherited Syphilis—Levaditi describes with colored plates the histologic findings in 4 syphilitic new born infants, and in an infant who had succumbed to pneumonia, and in a macerated fetus from syphilitic parents. The *Spirochaeta pallida* was found in large numbers in the liver, lungs, suprarenal capsules, and skin, most numerous in the order named, it was comparatively rare in the other organs. The finding of such large numbers of these spirochetes in the macerated fetus, and also in those infants who had died after breathing only once or twice, disproves the assumption that the spirochete might be an agent of secondary infection. In the cases of acute and rapidly fatal syphilitic infection in these infants the spirochetes were found more diffusely distributed throughout the organism, while in the one case of tardy inherited syphilis the parasites seem to have been mainly confined to the organ principally affected by the syphilitic process, namely, the liver. This localization of the spirochetes in the viscera of the offspring of syphilitic parents suggests the possibility of an inherited syphilis exclusively confined to the splanchnic organs. It might develop without any syphilitic manifestations on the skin or mucous system. This essentially visceral form of syphilis might precede the appearance of external syphilitic lesions, and is interesting from the questions in regard to prophylaxis which it raises. The paternal origin of the inherited syphilis seems certain in one of the cases described. The spirochetes do not seem to linger by preference in the blood, but fasten themselves in the vessel walls and multiply there, passing thence into the cells of the

parenchyma and the connective tissue. They seem to be able to penetrate into the relatively intact protoplasm of certain epithelial elements, such as the cells of the liver and kidneys, of the suprarenal capsules, and probably those of the sweat glands. The pathogenesis of syphilitic lesions is thus explained by the findings of the spirochetes as they are traced through the endarteritis and periarteritis into the connective tissue (infiltration by mononuclears and sclerosis), and then into the cells of the parenchyma (degeneration of the parenchyma). The maceration of a syphilitic fetus is probably an autolytic, fermentative process in dead tissues. The intrauterine death may be due to intense spirochete infection. Findings of active phagocytosis against the spirochetes were apparent in all the infants. (See editorial.)

Bulletin de l'Académie de Médecine, Paris

- 27 (Year LXX Nos 56) *Emigration et santé publique (public health). Chantemesse and P. Borel
- 28 *Sur la statistique et la prophylaxie de la tuberculose
- 29 *Phrénoptosis. P. Glénard
- 30 Assistance médicale et hygiène publique indigènes à Madagascar pendant l'année 1904. Kermorhant and others

27 **Emigration and Public Health**—Chantemesse calls attention to the lax measures in vogue in regard to emigrants passing through France to embark for America. He contrasts them with the strict regulations of the United States authorities, especially those enforced before allowing the embarkation of prospective emigrants on vessels bound for our ports. He states that nearly all emigrants from Greece, Syria, etc., pass through France, a total of 70,000 in 1904, and they are under no sanitary supervision after they arrive in southern France and are transported to Havre, changing cars frequently en route. Those found by the steamship company's medical inspectors to have a serious disease that would bar their admission to the United States are sent back to their country, while those with readily curable diseases, or those delayed for the five day quarantine are boarded out in the town. They report to the inspector every day, and when cured are allowed to embark. In the interim they are liable to spread infection through the hotels and lodging houses where they stop while under treatment, entirely free from any medical sanitary inspection on the part of the town authorities. When rejected as suspicious by the inspectors they wander around the streets of the city ready to spread contagion if the suspected disease actually exists. The French laws on the subject of emigrants date from 1861 and he urges the passage of new ones to place the emigrant service on the same footing as in other European countries and in the United States.

28 **Statistics and Prophylaxis of Tuberculosis**—The prolonged discussion on this subject shows how misleading statistics are liable to cause mistaken conclusions. The discussion brought out the experience of many practitioners, some advocating and others opposing compulsory notification of cases of tuberculosis. Nearly all accept the importance of notification of cases of death from the disease for disinfection of the apartment. It seems that the mortality from tuberculosis is much higher in France than in Germany, and that it is constantly increasing.

29 **Phrenoptosis**—Glénard is the apostle of splanchnoptosis and here describes a condition which he calls phrenoptosis, that is, downward displacement of the diaphragm. He considers it responsible for the conditions known as movable heart and cardioptosis, defining movable heart as a cardioptosis, while the cardioptosis is the consequence of the phrenoptosis, the phrenoptosis in turn is merely an accessory episode of the general tendency to ptosis. He states that enteroptosis is a nutritional affection of hepatic nature. The same causes that induce liver affections preside over its origin. It is a malady built up from detached fragments of five morbid groups: dyspepsia, neuropathies, liver affections, nutritional disturbances, and a fifth group which includes movable kidney, movable liver, movable spleen, and movable uterus. It is the character of the ptosis which cements together these fragments. Enteroptosis is the cause of one third of all the dyspepsias and neuropathies in women, and in every 100 cases fully 80 of the patients are women. Once recognized it is readily curable, but it is incurable when not

diagnosed and the special indications treated. The efficacy of appropriate treatment, he believes, is one of the arguments in favor of accepting the affection of a definite morbid entity. The most effectual measure in combating the condition is an appropriate sustaining corset, as he has described in detail in various communications. The latest appeared recently in the *Revue des Maladies de la Nutrition*, 1905.

Presse Médicale, Paris

- 31 (XIV, No 6) Sur les septicémies en général et les septicémies méningococciques en particulier. Follet and Saclapelle
- 32 La sémiologie urinaire des opérés (urine after operations). L. Vidal
- 33 (No 7) L'élévation congénitale de l'omoplate (of the scapula). A. Broca
- 34 Le meilleur procédé d'entérorrhaphie après entérectomie. P. Desfossez
- 35 (No 8) *L'ouverture de la pleure sans pneumothorax. T. Puffer
- 36 Existe-t-il une stomatite provoquée par les dentiers en caoutchouc (rubber tooth plates)? C. Mahé
- 37 (No 9) De la sclérite. A. Létienne
- 38 Radioscope gastrique. G. Leven and G. Barret
- 39 (No 10) Des oblitérations artérielles par embolie dans le cours des maladies du cœur (heart disease). E. Barlé
- 40 (No 11) L'albumine dans l'alimentation des tuberculeux. H. Labbé and G. Vitry
- 41 *L'intoxication saturnine et traitement de la colique de plomb. Delcarde and E. Dubois
- 42 La méthode de Bler et le massage dans les contusions et les entorses (sprains). R. de Gaulejac.

35 **Opening the Pleura Without Pneumothorax**—Tuffier recalls his research in 1895 in which, with Hallion, Quénu and Jonguet, he demonstrated that it is possible to inflate the bronchi sufficiently to prevent retraction of the lung when the chest is opened, without interfering with the general circulation. An apparatus was devised and presented to the Société de Chirurgie with which the patient breathed only air under pressure. The apparatus is merely a tube introduced through the mouth into the trachea, an elastic bag around the tube is inflated to plug the air passages outside of the tube. Air under pressure can then be pumped through the tube into the lung and all retraction prevented. It proved very successful on dogs. At first his apparatus was regarded as too complicated in comparison with the benefits to be gained from it, pneumothorax not being regarded by others as such a drawback as he considered it. The subject gained new interest, however, when Sauerbruch invented his air chamber in which operations are performed under minus pressure, while the head of the patient projects outside the chamber and the anesthetic is given outside. Brauer's apparatus reverses the principle, the head of the patient being inside a small air chamber in which the air is kept at plus pressure. This principle is the same as that on which Tuffier's early apparatus was based. Tuffier has performed three important operations with the aid of the Brauer hyperpressure apparatus. (He has both the Sauerbruch and the Brauer apparatus installed in his service.) It worked to perfection, he says, but both this and the Sauerbruch chamber are so extremely complicated that his early apparatus based on the same principle as Brauer's, seems simplicity itself in comparison. He gives illustrations of it (as also of the Sauerbruch and Brauer apparatus), and describes its workings in his experimental experiences with it. The Sauerbruch chamber might be utilized, he remarks, in operating on the brain or elsewhere when venous hemorrhage is feared. Under strong minus pressure there would be less danger that the veins would bleed much. The Brauer apparatus can be used only for operations on the lungs. In all work of the kind, Tuffier suggests that mixing oxygen with the air inhaled would lighten the task of the lungs and facilitate the operation.

41 **Treatment of Lead Colic**—Delcarde and Dubois report the successful application of epidural injections of cocaine as a means of relieving lead colic. No disturbances were observed in any of the 16 cases in which this treatment was applied. The pain vanished almost at once after the lumbar injection of the anesthetic.

Archiv f Gynakologie, Berlin

Last indexed, page 691

- 43 (LXXVII No 3) Bedeutung der Hysterie in der Geburtshilfe (hysteria in obstetrics). O. Bürger (Schauta's clinic Vienna)
- 44 Ueber Acardius. A. Bauerlein

- 45 Fatal Nephritis in Parturients Without Eclampsia.—Tödliche Nephritis bei Gebärenden ohne Eklampsie. W. Poter. P
 46 *Ueber Cervix Verletzungen bei Primiparen (lacerations) P Scheurer
 47 Behavior of Relics of Ovary in Case of Dermoid Cysts.—Verhalten des Eierstockrestes bei Dermoidcysten, insbes. über ovarielle Fettresorption A. Gentili.
 48 Zur Kasuistik der extramembranösen Gravidität W. Pfeil stecker

46 Laceration of Cervix in Primiparae.—Scheurer reviews 99 cases of laceration of the cervix in primiparae. Bleeding was the only symptom that called attention to the tear, and this was sometimes out of all proportion to the extent of the laceration. In more than one-fourth of all the cases the laceration involved more than half of the vaginal portion of the cervix. More than 50 per cent of the extensive lacerations occurred in deliveries in which obstetric-operative measures had been applied. Abnormal position of the head and large size of the child favor injury of the cervix. It was impossible to detect any influence on the morbidity of the puerperium or on the involution of the uterus from the lacerations.

Deutsches Archiv f. klinische Medizin, Leipsic

Last indexed XLV page 1833

- 49 (LXXXV Nos. 3-4) Aspergillus niger bei Pneumomykosis aspergillina. W. Riesel. One case.
 50 *Klinische und experimentelle Untersuchungen über Trichinosis und über die Eosinophilie im allgemeinen. C. Stäubli.
 51 Zur Pathologie der Asthma bronchiale P. V. Jezerski.
 52 *Blood Pressure and Hypertrophy of Heart in Nephritis.—Ueber Blutdruck und Herzhypertrophie bei Nephritikern. A. Loeb.
 53 Fall von Adams Stokes'scher Krankheit mit Dissoziation von Vorhof und Kammer Rhythmus. Lichtheim.
 54 4 Fälle von Störung der Reizleitung im Herzmuskel (disturbance in conduction of stimuli by heart muscle). G. Joachim.
 55 Action of Light on Enzymes Compared with Action of Photodynamic Substances.—Wirkung des Lichtes auf Enzyme in Sauerstoff und Wasserstoff Atmosphäre verglichen mit der Wirkung der photodynamischen Stoffe. A. Jodlbauer und H. v. Tappeiner.
 56 *Dark Action of Fluorescent Substances.—Weitere Untersuchungen ob ohne Dunkelwirkung der fluoreszierenden Stoffe statthab. Id.
 57 Ueber die Wirkung fluoreszierender Stoffe auf Toxine. Id.
 58 *Experimentelles zur Gichtfrage (study of gout). J. J. van Loghem (Amsterdam).
 59 (Nos. 5 & 6) *Neue Beiträge zur Lehre von der Muskel Atrophie bei supranuclearen Lähmungen, bes. bei der cerebralen Hemiplegie. H. Steinert.
 60 *Zur Pathogenese der Tetanie. F. Pineles.
 61 *Neuere klinisch bakteriologische Erfahrungen bei Typhus und Paratyphus. A. Briou and H. Kayser (Strasbourg).
 62 Die nosologische Stellung des Symptomkomplexes Abdominal typhus. Id.
 63 Untersuchungen über das Lokalisationsvermögen und das stereognostische Erkennen. A. Schlittenhelm.
 64 Ueber Myasthenie bei sexuellem Infantilisimus, nebst Untersuchungen über die myasthenische Reaktion. H. Curschmann und M. Hedinger.
 65 Ueber Bronchitis obliterans. Edens. Three cases.
 66 Embolie der Lungen Arterien. C. Hart. Supplement to article in vol 84.
 67 Blood Pressure and Pulse Pressure. Reply to Fellner's article. J. Strasburger.

50 Trichiniasis and Eosinophilia.—Stäubli's experience with 7 cases of trichiniasis emphasizes anew the value of eosinophilia as a sign of the affection. The number of eosinophiles began to increase about nine days after ingestion of the infected meat. The eosinophilia, he shows, is connected with the migration of the embryos or their penetration into the muscles. The young brood are distributed by way of the vascular system, large numbers being evident at times in the blood of the heart. He saw no evidences of local production of eosinophiles at points where the muscle was specially involved. The eosinophilia must be regarded, he states, as a reaction on the part of the organism to substances which pass into the blood from the embryos, or possibly from the degenerated muscle substance. His experiments on animals confirmed the assumption that a rapid destruction of lymphocytes is a bad sign. Four of his cases terminated fatally, and in these he noted the combination of Kernig's sign and absence of the knee jerks. In all his cases the diazo reaction was pronounced, a point which may aid in differentiation.

52 Blood Pressure and Hypertrophy of Heart in Nephritis.—Loeb insists that the high arterial pressure is primary and the hypertrophy of the heart a secondary phenomenon in acute and chronic nephritis. He accepts the elevation of the blood pressure as a regulating phenomenon—the work of the glomeruli. Whether this occurs by chemical or reflex means is still a question. The arterial pressure in his experience

always rose when uremia was impending or established. Patients leading tranquil lives, on a light diet, kept the blood pressure at a moderate height. Change to a mixed diet, especially when meat and salt were taken, always increased the pressure.

58 Experimental Study of Gout.—Van Loghem summarizes the results of his research in the statements that uric acid and sodium urate are soluble in the body fluids of the rabbit and dog, the former much more than the latter. Alkalies taken internally favor experimental deposition of the urates, while acids prevent it. This suggests, he adds, the possibility that hydrochloric acid might be used for a rational prophylaxis of the formation of urates in man.

59 Atrophy of Muscles in Cerebral Paralysis.—Steinert has been studying the muscular atrophy in 68 cases of paralysis. His results harmonize with the conclusions of previous similar research, and throw light on several new points. It seems to be an established fact that cerebral paralysis of the extremities is followed by atrophy of the muscles in the limbs as regularly as is the case in every peripheral paralysis. He found the atrophy more pronounced in the cases of flaccid than of spastic paralysis.

60 Pathogenesis of Tetany.—Pineles presents an array of arguments to prove that all forms of tetany in man and animals have a common origin in an insufficiency of the "epithelium bodies," the parathyroids. The thyroid gland may be entirely removed, without subsequent tetany, if they are left intact. These bodies perform the task of rendering innocuous certain toxic substances generated in the body. These toxins are the tetany toxins, and when the organism is not protected tetany is liable to develop. He is at work now on an extract of the parathyroids which he hopes will prove an effectual remedy for the prevention and cure of tetany.

61 Latest Views of Typhoid and Paratyphoid.—During the last two years Briou and Kayser have made extensive clinical and bacteriologic studies in over 200 cases of typhoid fever. The definition of infection with the Eberth Gaffky bacillus, based on their findings, is merely the vague description: "a febrile condition not to be explained by any evident findings in any organ, and in which there is no exanthem nor special course characteristic of any other disease." This definition is important theoretically, as it shows that it is impossible to determine any clinical symptomatic entity from the identity of the causal agent of the infection. They ascribe infection to the tonsils. "The portal of entry lies either in the gastro-intestinal tract or above the stomach, perhaps in the region of the tonsils. The frequent positive bacteriologic findings in the tonsils suggest the plausibility of the latter assumption, and explain the first symptoms of typhoid—which are always of a general nature—as due to the entrance of the bacilli from the tonsils into the lymphatic system and thence into the blood. The bacilli were found in the blood at the very beginning of the disease in 94 per cent of the cases, and they gradually disappeared from the blood as the disease progressed. The bacilli circulating in the blood and lymph induce the characteristic foci in spleen and liver, in the mammary and other glands, and in the intestine, in the brain, lungs and serous membranes, and in the skin (roseolæ). Any organ may be affected, the lymphatic apparatus with especial frequency. The lesion in Peyer's patches is a phenomenon co-ordinated to the entire process, only it occurs with exceptional frequency. It is entirely absent in some cases, and this seems to be the rule in children. After the bacilli have disappeared from the blood and other organs they may lurk for months and years in the gall bladder, particularly when there is residual bile. The presence of gallstones. The typhoid affection may persist in the gall bladder as a purely local process for a long time. The irritation of the body cells from the presence of the bacteria results in the production of substances which pass into the body juices and are the cause of agglutination and of the specific bactericidal action." Their experiments with animals and with human subjects effectually demonstrated that the intestinal tract is not a favorable soil for the settling of the typhoid bacillus. Its growth is checked or it is entirely destroyed in the intestines. They regard it as difficult to imag-

in any circumstances which would render it possible for the bacilli to make their way primarily into the blood through the intestinal walls. One of their findings to which they call attention is the spasmodic way in which the bacilli were found in the dejecta, at intervals none was to be found in the diarrhetic stools, even at the height of the disease. In a number of dubious cases—which later proved to be typhoid—no typhoid bacilli could be discovered in the stools at first. This is another argument in favor of the assumption that typhoid does not always commence in the intestines, but may start as a lymph and blood affection (possibly entering by way of the tonsils). The positive findings in the stools always increased from about 72 per cent in the first week to about 45 per cent in the third week. As the final conclusion from this extensive research, Brion and Kayser assert that the assumption of the symptom complex of typhoid fever as an etiologic entity must be abandoned. It must be regarded as a group of affections not to be differentiated clinically, whose causal agents form a special group apart.

Deutsche medizinische Wochenschrift, Berlin and Leipsic

- 65 (LXXII No 3) *Versuche zur Übertragung der Syphilis auf Affen (transmission to monkeys) Neisser
- 69 What Has the General Practitioner Gained from the Progress in Surgery of the Kidneys?—Was ergibt sich für den praktischen Arzt aus den Fortschritten der Nierenchirurgie? H Küttner
- 70 Ueber Exsudat Zellen im allgemeinen und die Exsudat Zellen bei verschiedenen Formen von Meningitis im besonderen T Orth
- 71 Ueber die diätetische Behandlung des Magengeschwürs (of gastric ulcer) H Senator
- 72 Ueber den derzeitigen Stand der Tuberkulose Bekämpfung (present status of war against tuberculosis) R Koch
- 73 Exstirpation einer malignen Nierengeschwulst (kidney adenocarcinoma in boy of 3. Recovery) I Cuno and Trapp
- 74 Ueber Tonsillar Tuberkulose O Reunert
- 75 *Eine Methode zur schnellen und billigen Herstellung von Projektionsbildern (rapid and cheap lantern slides) Schumburg (Hanover)
- 76 (No 4) *Ueber Operationen am Pankreas und am Magen (stomach) W Kürte
- 77 *Ueber Framboesia tropica (Yaws) A Castellani (Colombo Ceylon)
- 78 *Pyrodin Anemia in Dogs—Pyrodivergiftung bei Hunden M Rothmann
- 79 *Zur Differential Diagnose des Heu Asthmas gegen die anderen Asthma Formen A Wolff Eisner
- 80 Die Agglutination in den Händeln des praktischen Arztes (in hands of general practitioner) W Lacle
- 81 *Eine neue Methode der quantitativen Aceton Bestimmung I Bluth (Neuenahr)

68 Transmission of Syphilis to Monkeys—The results of Neisser's extensive researches were mentioned in the news columns on page 287. He had nearly 900 monkeys at his disposal, and found that the lower types, as well as the higher, were susceptible to syphilitic infection, although in a lesser degree. The general symptoms observed in the higher animals seldom appeared in the lower types. The animals were inoculated by rubbing the material into deep scarifications. Subcutaneous injection of material or vaccine always gave a negative result. The sound organism seems to be able to destroy the virus inoculated into the subcutaneous tissue, although it may prove to be possible to produce an antitoxin in this way. Passage of the virus through several animals seemed rather to enhance than to attenuate its virulence. The *Spirochaeta pallida* was found in a number of cases, confirming Schaudinn's statements. Neisser's assistants, Baermann and Halberstädter, have been left behind in Batavia and are continuing the research. To date it has not resulted in any definite general conclusions.

75 Inexpensive Lantern Slides—Schumburg outlines the drawings on a sheet of glass, fixed with shellac and coated with soot.

70 Operations on Pancreas and Stomach—Kürte has operated on 6 patients on account of acute pancreatitis and fatty necrosis, with a favorable outcome in every instance. Early intervention and drainage are able, he thinks, to prevent the spread of the pancreatitis and suppuration. He describes the details of his 2 last operations of this kind, and also of 7 operations on the stomach. He operates without delay even in the acute stage of pancreatitis, hoping thus to avert suppuration and necrosis. The attack resembles gallstone colic except that there is more collapse, and symptoms of peritonitis develop in the upper abdomen. In one of his stomach cases

there was great dilatation of the stomach without stenosis of the pylorus. The extreme gastropsis linked the pylorus, and also entailed complete motor insufficiency. All his patients recovered except one who had cancer of the stomach on a basis of gastric ulcer. The patient, a woman, deferred the operation until she became too weak to rally.

77 Spirochetes in Yaws—Castellani states that he found spirochetes of the pallida type in 11 out of 14 cases of typical yaws on the island of Ceylon.

78 Experimental Anemia—Rothmann has been studying the spinal cord of dogs after severe anemia had been induced by means of pyrodin. A systematic degeneration was evident, even when no functional demands were made on the cord.

79 Differentiation of Asthma—Eisner has encountered a number of cases in which the symptoms indicated hay fever or asthma, but the absence of reaction to pollen disclosed that the asthma was a purely nervous affection. He makes the pollen test with pollen of grains, grasses and corn, he grinds it in salt solution and centrifugates it. If the albuminous solution thus obtained is introduced into the eye of a susceptible individual, the eye itches, becomes bloodshot, and in the severer cases the usual train of hay fever symptoms follows unless aborted by appropriate measures. Among 100 asthmatic persons thus tested in Berlin, only 4 were found who failed to show the specific reaction to the pollen. This shows that the tendency to hay fever is more prevalent in Germany than hitherto supposed, as the pollen test causes no disturbance whatever in normal persons. In conclusion, Eisner discusses the reasons for absence of antitoxin formation after injection of albumin.

81 Quantitative Test for Acetone—Bluth's test is based on the delay in the change of tint when the urine is treated with sodium nitroprussid, sodium hydrate and acetic acid. The more acetone present, the longer the interval before the change of tint. His test, he says, dispenses with repeated distillation and subsequent titration, it requires only from fifteen to thirty minutes, and in regard to accuracy leaves nothing to be desired.

Deutsche Zeitschrift f Chirurgie, Leipsic

Last indexed, page 237

- 82 (LXXIX, Nos 46) *Die Reposition der Luxatio obturatoria durch Ruck nach aussen Riedel
- 83 *Ueber den Wert der Mobilisierung des Duodenum bei Operationen wegen Steinen in den tiefen Gallenwegen (in gall stone operations) H Lorenz
- 84 Zur Wirkungsweise der Röntgen Strahlen (mode of action of rays) O F Schulz and R S Hoffmann
- 85 Zur Pathologie, Diagnostik und Therapie des schnellenden Fingers (trigger finger) Marchesi
- 86 *Ueber Cysten Nieren bei Erwachsenen (cystic kidney in adults) F Sieber
- 87 *Zur Pathologie und Chirurgie der Osteomyelitis gummosa der langen Röhrenknochen (of long bones) M Landow
- 88 Application of Mobilizing Action of Hyperemia to Scoliotic Stiffness—Anwendung der mobilisierenden Wirkung der Hyperämie auf skoliotische Versteifungen R Klapp (Bier's clinic, Bonn) See abstract on page 625
- 89 Neues operativ autoplastisches Verfahren bei narbiger Kieferklemme (cicatricial lockjaw) R Alessandri (Rome)
- 90 *Nachbehandlung der chirurgischen Tuberkulose (after treatment) C Kraemer
- 91 Changes in Testicle of Rat After Application of Radium Rays.—Ueber die feineren Veränderungen im Hodengewebe der Ratte nach Einwirkung der Radiumstrahlen H A Thaler
- 92 Subluxation des zweiten Keilbeins (of second cuneiform bone) Bergmann

82 Dislocation of Head of Femur Through Obturator Foramen—Riedel observes that many experienced surgeons have never encountered this condition, but he has had 3 such cases. He was able to reduce the dislocation by a simple maneuver which he describes.

83 Mobilization of Duodenum as Aid in Deep Gallstone Operations—Lorenz describes the particulars of 5 cases of gallstones, requiring intervention in the deep biliary passages, in which he mobilized the duodenum as a preliminary measure. The advantages of this procedure were very great, and it was easily accomplished, although the conditions were exceptionally grave.

86 Polycystic Degeneration of the Kidney—Sieber's long article discusses the origin of the condition and describes a case personally observed in a woman of 46. He then summarizes 211 cases he has found in the literature, all in persons

over 20 years of age. He further refers to 32 published reports of cases in children from 8 weeks to 19 years old. In 9 cases the affection was found to be unilateral and in 150 bilateral. In the others the condition of the second kidney was not mentioned. In about one out of every 8 cases the affection caused no symptoms during life and was an autopsy surprise. In 62 cases nephrectomy was undertaken, generally on a mistaken diagnosis, and death followed in 20 out of the 61 cases in which the result is known. In 9 of the remaining 41 cases symptoms developed later indicating disease in the other kidney. Sieber concludes from his summary that operative intervention in case of polycystic degeneration of the kidney should not be advised unless under compelling circumstances, such as suppuration and anuria. Under other conditions, expectant, palliative treatment should be the rule. All injurious influences that might increase the demands on the kidneys should be warded off, and the heart action should be carefully supervised. The treatment, on the whole, should be similar to that for contracted kidney. On account of the frequent hereditary character of the affection the patient's near relatives should also be examined and warned to avoid all injurious influences liable to favor the development of a kidney affection. The symptoms of polycystic degeneration are uncertain and the course of the affection is irregular, so that the diagnosis is difficult. Only 21 of the cases on record were correctly diagnosed during life. The first and most important symptom is generally the increase in size of the kidneys. These organs may become so much enlarged that they nearly touch on the median line, although one is usually much larger than the other. In only 26 cases was it possible to palpate a tumor on both sides. Pain may or may not be present, and the urine is not characteristic. It is generally acid, limp and bright yellow, with little sediment. Hematuria was noticed in about a fifth of the cases. The general symptoms are all more or less the consequences of a chronic or acute uremia. The digestive apparatus is especially affected, and its disturbances may overshadow all the other symptoms, sometimes for years.

87 Gummatous Osteomyelitis of Long Bones.—Landow found it difficult to differentiate a case of osteomyelitis in the long bones of a girl of 16. The symptoms and location of the lesions suggested a tuberculous process. Hyperostosis of the tibia and the fact that none of the bone foci had ever displayed a tendency to suppurate, cast some doubt on this diagnosis. The idea of syphilis was discarded, as no trace of it could be found in the history and there were no other signs of syphilis, while Landow was assured that prolonged treatment on the assumption of inherited syphilis had been applied previously without any result. Operations disclosed extensive osteomyelitis and necrosis of the bones, but no tubercles nor staphylococci. Proper antisyphilitic treatment cured the recent foci, but operative intervention was required for the old lesions. The patient was restored to comparative health.

90 Necessity for After-Treatment of Surgical Tuberculosis.—Kraemer cites a number of instances from his own experience in which patients apparently healthy for a few years after operative treatment of some local tuberculous lesion, later developed pulmonary phthisis. The persistence of a latent focus after what was supposed to be radical extermination of the tuberculous process would have been revealed in these cases if tuberculin had been injected after the operative wound had healed. He consequently advocates testing with tuberculin as a routine measure after the healing of any surgical or gynecologic tuberculous process treated by conservative or operative measures. The tuberculin test will show either that the patient is free from tuberculosis, in which case he can be dismissed from further treatment, or that some latent focus still persists, in which case the local reaction will frequently point to the site of the lesion. Persons in this latter category should be given appropriate treatment until their entire freedom from tuberculosis can be definitely established. By these means it will be possible to save these individuals from a revival of their tuberculous affection by propagation of metastasis, and also to protect other persons from contamination by their infectious secretions, and unborn children from inherited infection. It should be accepted as a prin-

ciple that every individual with a latent tuberculous focus is to be regarded as already a candidate for consumption, and treated accordingly.

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- 93 (LVIII, Nos 12) Studien über die Beziehungen zwischen optischer Aktivität und Reduktion bei diabetischer und nicht diabetischer Glykosurie. H. C. Geelmuyden
- 94 Infektion mit Ankylostomum duodenale von der Haut aus (through the skin). A. Looss
- 95 Chemical Composition of Blood and Organs.—Weitere Untersuchungen über die chemische Zusammensetzung des Blutes und verschiedener menschlicher Organe. M. Dennstedt
- 96 Beitrag zu den Purpura Erkrankungen. H. Risel
- 97 Ueber paroxysmale Hämoglobinurie. J. Donath and K. Landsteiner
- 98 Stoffwechseluntersuchungen bei einem Fall von Pentosurie (metabolism). Tintemann
- 99 Zur Mechanik der Expektoration. E. Aron
- 100 (Nos 3-4) *Klinische Untersuchungen über die Viskosität des Blutes. J. Bence
- 101 *Experimentelle Untersuchungen über die physiologische Bedeutung der Radioaktivität der Mineral Wässer. P. Bergell and A. Bickel
- 102 Zur Kenntnis der Rückenmarksveränderungen nach Verschluss der Aorta abdominalis (changes in spinal cord after obstruction of aorta). A. Alexander
- 103 *Cytologie der Cerebrospinal Flüssigkeit bei Nervenkranken (in nervous affections). E. Simele
- 104 *Fall von geheiltem Aneurysma dissecans der Aorta (healed). H. Börger
- 105 Experimentelle Untersuchungen über die Entstehung der Haracylinder (tube-casts). P. S. Wallerstein (Moscow)
- 106 *Einfluss des Wassergehaltes des Blutes auf die Dimensionen der roten Blutkörperchen (influence of proportion of water in blood on size of reds). M. Georgopoulos
- 107 *Blood Findings in Children with Adenoid Vegetations.—Blutbefund bei Kindern mit Wucherungen des Nasenrachensraums. M. Scheler
- 108 Origin of Renal Dropsy.—"Folgen subkutaner Kochsalzzufuhr nach Nephrektomie." A. Albu

100 Viscosity of the Blood.—The research reported by Bence was conducted at von Koranyi's clinic at Budapest. It shows that the viscosity of the blood increases and subsides with the proportion of carbon dioxide in the blood. The latter acts on the red corpuscles, modifying their size and surface, and thus rendering the blood more or less fluid. The relations between the proportion of carbon dioxide and the viscosity can be observed in the circulating blood. The increasing viscosity of the blood from excess of carbon dioxide overburdens the heart. If the overcharge of carbon dioxide is the consequence of cardiac insufficiency, it tends in turn to increase the latter. Inhalation of oxygen in appropriate cases reduces the viscosity of the blood unduly laden with carbon dioxide, as it promotes the elimination of the latter. By this means it is possible to relieve to a certain extent the overburdened heart. The blood in nephritis is less viscous than normal blood, probably from the excess of water. Attempts to influence the viscosity of the blood by varying the food gave negative results in his experiments on animals.

101 Physiologic Significance of Radioactivity of Mineral Waters.—Bergell and Bickel have been continuing their research on this subject, their findings corroborating their previous assertions in regard to the powerful physiologic and biologic influence of the natural radioactive emanations of the mineral waters. All observations to date have shown that waters rising from the depths of the earth are endowed with marked radioactive powers while surface spring waters are comparatively free from it. The waters lose their radioactivity rapidly after they are taken from the earth. Tests with Wiesbaden thermal waters showed that the digesting power of gastric juice in a test tube was increased by the radioactivity. If thermal water was added to pure gastric juice, the digesting power of the juice was reduced by the dilution, but the reduction was less marked when the waters were still radioactive than when they had lost their radioactivity. Kalmann has recently announced that Gastein waters arrest the development of the *Bacillus prodigiosus* as long as they still possess their radioactivity, but not after they have lost it. The conclusions of the research all point to the assumption that it is possible for physiologic and biologic processes to be influenced by the radium emanations in mineral waters.

103 Cytology of Cerebrospinal Fluid in Nervous Affections.—Simele tabulates his findings in a dozen cases of tabes, meningitis, paralysis or other nervous affections. They differ from those of other investigators in certain respects, as he re-

lates in detail, comparing them with the data in previous articles on the subject

101 Healed Dissecting Aneurism of the Aorta—Bürger has found 18 cases of dissecting aneurism of the aorta terminating in recovery on record in the literature, and describes a case personally observed at Erlangen. The aneurism in this case was evidently the result of a so called internal trauma. It healed as the dividing wall became perforated, allowing the layers of the wall to grow together once more. The conditions in the circulation, however, had been rendered so unfavorable that the already hypertrophied heart gave out in the course of a year.

106 Influence of Water Content of Blood on Size of the Red Corpuscles—The research described was made on 200 patients with dropsy, severe diarrhea or other conditions causing great difference in the proportion of water in the blood. It demonstrates that hydremia has nothing to do with the production of megalocytes. Also that the biconcave microcytes are intact red corpuscles.

107 The Blood in Children with Adenoid Vegetations—Schäfer found the proportion of hemoglobin about 138 per cent below normal in the children with adenoid vegetations whom he examined. The red corpuscles were about the usual number but there were always from 14,000 to 17,000 white corpuscles and sometimes 21,000 and 21,000. The small and large lymphocytes were unusually numerous, and the multinucleated somewhat diminished. A slight degree of chlorosis with leucocytosis, specially lymphatic, was the rule. Removal of the growths caused improvement, the hemoglobin rose to 71, 80 or 92 per cent in the course of from one to several months afterward, while the leucocytosis declined. In conclusion he remarks that the adenoid vegetations in the nasopharynx are not the only manifestations of hyperplasia in the lymphatic system. The lymph glands in the neck and under the jaw are always more or less swollen in these cases. The swelling almost invariably subsides after removal of the adenoid vegetations, and the somewhat low blood pressure rises to approximate normal.

Nordiskt Medicinskt Arkiv, Stockholm

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- 109 (XXXXIII Internal Medicine No 3) *Beitrage zur Methodik der klinischen Stuhluntersuchungen (examination of stools) II P. T. Oerum (Copenhagen)
- 110 *Zur Frage von der Aetiology und Pathogenese der angeborenen Herzkrankheiten (congenital heart affections) C. Sundberg
- 111 Cytologie der Pleura und Peritoneal Ergüsse II Küster

109 Clinical Examinations of Feces—Oerum has been studying the intestinal functions in the clinic for more than a year, following the directions of Schmidt and Strassburger. The test diet consists of 0.5 liters of milk and 50 gm zwieback early in the morning, for breakfast, 40 gm oatmeal or 0.5 liters of oatmeal gruel, 10 gm butter, 200 gm milk, 300 gm water and one egg (strained), for dinner, 125 gm chopped beef (weighed raw), browned over but still raw inside, and 250 gm mashed potatoes (made with 190 gm potatoes, 100 gm milk and 10 gm butter). The afternoon meal is like the earliest meal, and the supper like the breakfast. A tablet of 0.3 gm of pulverized carmin is given usually at the commencement and conclusion of the test diet, which is kept up for three days or longer. For the macroscopic examination he takes a lump of feces the size of a walnut and rubs it in a mortar with water and then spreads the soft mass in a thin layer on a wide glass saucer standing on a black background. He then examines it for mucus, evidences of parasites, pus, foreign bodies, etc., relics of connective tissue from the raw meat, muscle fiber and potato, and for crystals of ammonia or magnesium phosphate. Microscopic and chemical tests are then applied. His experience with the albin test for invisible blood has been extremely favorable in 100 cases. He regards it as a great advance in our means of detecting carcinoma of the intestinal tract and latent ulcer in stomach or intestine. He describes the technique for this and for various other tests, and the importance of the findings is emphasized. He determines the proportion of water by weighing a jar containing some dry sand and then pouring 10 c.c. of the diluted feces on

the sand, with a little diluted sulphuric acid. The jar is then dried out to a constant weight, the difference between the two weights being the weight of the dry substances in 10 c.c. of feces. When an abnormal proportion of fat is discovered in the diet, he limits the intake of fat, which sometimes materially benefits chronic intestinal affections. His experience has confirmed the assumption that chronic constipation in the majority of cases is due to exceptionally perfect utilization of the food ingested with the consequent lesser secretion in the intestines from lack of stimulation from fecal masses.

110 Pathogenesis of Congenital Heart Affections—Sundberg describes the autopsy findings in a case of congenital deformity of the heart. The patient, a man, lived to the age of 22 although with various malformations of the heart. They all bore the appearance of having been the result of excessive bending over of the head during uterine existence.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

CLINICAL APPLIED ANATOMY, or the Anatomy of Medicine and Surgery. By Charles R. Box, M.D., B.Sc., M.R.C.P., F.R.C.S., physician to outpatients of St. Thomas's Hospital, and W. McAdam Leckie, M.S., F.R.C.S., Assistant Surgeon, Joint Lecturer on Anatomy and Demonstrator of Operative Surgery at St. Bartholomew's Hospital. Illustrated by 45 plates, of which 12 are colored, and 8 figures in the text. Cloth. Pp. 471. Price, \$4.00. Philadelphia: P. Blakiston's Son & Co., 1906.

THE WORLD'S ANATOMISTS. Concise Biographies of Anatomic Masters, from 300 B.C. to the Present Time, whose Names Have Adorned the Literature of the Medical Profession. By G. W. H. Kemper, M.D., Professor of the History of Medicine in the Medical College of Indiana, Indianapolis. Revised and enlarged from the original serial publication in the Medical Book News. 11 illustrations, 9 of which are portraits. Paper. Pp. 79. Price, 50c. Philadelphia: P. Blakiston's Son & Co., 1906.

SCIENTIFIC MEMOIRS BY OFFICERS OF THE MEDICAL AND SANITARY DEPARTMENTS OF THE GOVERNMENT OF INDIA. Issued under the Authority of the Government of India by the Sanitary Commissioner with the Government of India Simla. Calcutta: Office of the Superintendent of Government Printing India. 1906. No. 21. Standardization of Anti Typhoid Vaccine by Captain George Lamb, M.D., I.M.S., and Captain W. B. C. Forster, M.B., D.P.H., I.M.S. Price, annas, 6, or 7d.

THIRD TREATISE ON THE EFFECTS OF BORAX AND BORIC ACID ON THE HUMAN SYSTEM with Diagrams being a Critical Review of the Report of Dr. H. W. Wiley, Chief of the Bureau of Chemistry of the U. S. Department of Agriculture to the Secretary of Agriculture. By Dr. Oscar Liebreich (Translated from the German). Paper. Pp. 70. Price, \$1.75. Philadelphia: P. Blakiston's Son & Co., 1906.

THE NATURAL LAWS OF SEXUAL LIFE, Medical Sociological Researches by Dr. Anton Nystrom, Stockholm. Authorized Translation from the Third Swedish Edition by Carl Sandzen, A.M., M.D., Ph.D., Professor of Physical Therapeutics, University of Kansas School of Medicine. Cloth. Pp. 260. Price, \$2.00. Kansas City, Mo.: The Burton Company, Medical Publishers, 1906.

STATF CHILDREN RELIEF BOARD. Report of the President, the Hon. C. K. Mackellar, M.B., C.M., M.L.C., for the year ending April 5, 1904 and also for the year ending April 5, 1905. Legislative Assembly New South Wales. Paper. Pp. 37 and 40. Price, 1s 6d and 1s 9d. Sydney: William Applegate Gullick, Government Printer, 1904 and 1905.

CHEMISTRY OF THE ALBUMENS. Ten Lectures Delivered in the Michaelmas Term 1904, in the Physiological Department of University College, London, by S. B. Schryver, D.Sc., Ph.D., Lecturer in Physiological Chemistry to University College, London. Cloth. Pp. 101. Price, \$2.00. Philadelphia: P. Blakiston's Son & Co., 1906.

NATURE AND HEALTH. A Popular Treatise on the Hygiene of the Person and the Home. By E. Curtis, A.M., M.D., Emeritus Professor of Materia Medica and Therapeutics, Columbia University, New York. Cloth. Pp. 313. New York: Henry Holt & Co., 1906.

THE TRI-UNIT PHILOSOPHY. A Treatise Based on the Discovery of Unit Matter, and How It Develops into Elements by Virtue of the Combined Action of Energy and Force. By Porter Mellen Jones, M.D., Chicago. Paper. Pp. 171.

PUBLICATIONS OF THE MASSACHUSETTS GENERAL HOSPITAL, Boston. Clinical Contributions Vol. 1 No. 2, February, 1906. Paper. Pp. 125. Boston, Mass.: Journal of Medical Research Publishing Office.

BLACK'S MEDICAL DICTIONARY. Edited by John D. Comrie, M.A., B.Sc., M.B., M.R.C.P. With over 350 illustrations in the text. Cloth. Pp. 854. Price, \$2.50. New York: The MacMillan Company, 1906.

SIXTEENTH ANNUAL REPORT of St. Mary's Hospital, Rochester, Minn. Conducted by Sisters of St. Francis. Paper. Pp. 29. Rochester, Minn.: C. Elliott & Son, 1906.

STUDIES FROM THE BENDER HYGIENIC LABORATORY, Albany, N. Y. Reprints Vol. II, 1905. Paper. Pp. 111. Albany, N. Y.: Bradow Printing Company.

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Original Articles

ACUTE DILATATION OF THE STOMACH

WITH REPORT OF TWO CASES, ONE OF WHICH COMPLICATED PNEUMONIA AND ENDED IN RECOVERY

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CHICAGO

Acute dilatation of the stomach is a rare condition. In 1902 Thomson¹ collected less than fifty cases. A few have been reported since. It is a grave condition, truly appalling, as its high mortality well indicates. Its recognition is not always easy, yet important, as it is probable that the earlier treatment is begun the better is the outlook. I report these two cases of acute dilatation of the stomach, therefore, because the rarity, gravity and importance of recognition of the disease make it desirable that every observed case should be put on record. One of these cases recovered—the first recorded recovery, I believe, where the disease has been a complication of pneumonia or pleurisy, in the other patient an autopsy was not to be obtained. I can, therefore, make no contribution to the morbid anatomy of the disease, knowledge concerning which is extremely scanty, but very desirable as helping one to a better insight into the as yet little understood pathogenesis and the true etiology.

I have thought it wise to add to the report of these cases a brief summary of the main points in the clinical history of this condition. One desiring fuller information can find it in the monograph of Campbell Thomson¹.

CASE 1.—E. S., male, aged 36, entered my service at the Presbyterian Hospital, Feb. 13, 1904.

History.—His family history was good, with the exception of a doubtful tuberculosis in an older brother. He had had measles as a child, smallpox in 1881 and a fever, probably typhoid, in 1886. He was a moderate user of tobacco. Up to one year ago he had used alcohol quite freely. He had been bothered with his stomach only after spells of excessive drinking. For the past year he had not been drinking and had been in excellent health. February 10 he was suddenly seized with a sharp pain in the right side of the chest. This was followed by chilliness, headache, cough, diarrhea, vomiting and fever.

Examination.—On examination he was found to be a well nourished man of moderate stature, with physical signs of consolidation evidently pneumonic, of the upper lobe of the right lung and the upper portion of the lower lobe of the same side. Dullness, bronchial breathing, increased vocal resonance and fremitus and a few fine crackling rales were plainly made out. The patient was somewhat cranotic and breathed with evident pain. There was a labial herpes. The tongue was dry. He was clear mentally. The physical examination as to the special senses, nervous system, heart, liver, rectum, genitalia and extremities was negative. The skin showed pitting from

variola. In the record of the examination of the abdomen it is recorded that "the lower border of the stomach is apparently above the umbilicus." "The spleen can be distinctly felt on deep inspiration."

Blood.—The blood on admission showed 5,280,000 erythrocytes, 33,100 leucocytes, nearly all polymorphonuclear, and hemoglobin 98 per cent.

Urine.—The single specimen of urine obtained on admission, specific gravity 1022, showed a heavy trace of albumin and contained numerous granular and hyaline casts. A twenty-four hour specimen, 1,000 c.c., specific gravity 1021, likewise contained a considerable amount of albumin, with many granular and hyaline casts.

Sputum.—In the viscid, rusty sputum, diplococci, many with capsules, were very abundant in stained smear preparations.

Course of Disease.—The illness for the first six days of his stay in the hospital pursued the course of a severe migrating pneumonia, there being involved in succession the right upper, right lower and left lower lobes. The temperature varied between 101 and 104. Most of the time the pulse was between 115 and 130. The respiration rose gradually from 25 to 60 a minute. The mental condition became one of extreme restlessness. The bowel movements changed from a yellowish or brownish semi-solid to a liquid greenish character on February 17. During the first five days after admission he did not vomit.

On February 15 I showed the patient in clinic and a careful examination was made, not only of the chest, but of the abdomen as well, and nothing out of the way was noted as to the stomach by external examination. Treatment consisted of five grains of ammonium carbonate every four hours. On February 17 one half ounce of whisky was ordered to be given every four hours. One dose of calomel (gr. 1) and soda was given February 17, when the stools had become so loose and frequent.

On the morning of February 18, the ninth day of the disease, I regarded him as a very sick pneumonic patient, but yet one who had a fair chance of passing through the crisis which could be looked for soon. The right upper lobe was already beginning to show signs of resolution.

That afternoon at 5 o'clock he vomited—I copy the record of the nurse—yellow fluid. At 5:30, half an hour later, he vomited dark brown fluid. At 6:30 p.m. he vomited about a pint of black fluid. At 7:15 p.m. he vomited a cupful of black fluid. He vomited repeatedly during that night, each time ejecting the black fluid and on several occasions as much as a pint. He became restless, extremely thirsty and very weak. Water was given in small amounts, digitalin and strychnin were administered hypodermically, and normal salt solution was given by rectum.

At 8:30 a.m., February 19, three pints of salt solution were injected under the skin. When I saw the patient an hour or two later he was quiet, had a fairly good pulse of 120, a rectal temperature of 102°, the breathing had gone down from 60 to 50, he had not vomited for two hours, and I hoped this was the beginning of the critical improvement.

In the evening, however, when I again saw him, his condition was decidedly more alarming. While temperature (101°) and respiration (44) were better, his pulse was of poorer quality, his countenance was sunken and haggard, he was semi-delirious and seemed profoundly shocked and toxic. He had again vomited the dark grumous material and his abdomen had become markedly distended.

¹ Campbell Thomson, "Acute Dilatation of the Stomach," New York, 1902. Also the review of the subject by Neck, "Die Akute Magenverwässerung" (Sammelreferat), Centralbl. f. d. Grenz. d. med. u. Chir., vol. VIII, No. 14 et seq. Extensive bibliographies are to be found in each of these articles.

An examination of the chest revealed the pneumonic areas clearing. The heart, while weak, was not dilated. The abdomen was greatly distended, very slightly tender on palpation, resonant, except in the flanks, a faint peristaltic wave occasionally passed from left to right. On tapping to test for fluctuation I was surprised to get it with a distinct slap of the wave against the hand, and there was a splashing sound that was plainly heard with the ear near to the body when the patient was shaken, and that sounded, when the stethoscope was placed over the abdomen, exactly like the echoing succussion of hydro pneumothorax. The fluid shifted readily, as shown by change of position of the patient.

Treatment—Feeling sure we were dealing with an acute gastric dilatation, I turned the patient on his side, not daring to have him sit up in his weak condition, passed the stomach tube and removed about a quart of dark grumous liquid. The stomach was washed until the water returned clear. The patient seemed much relieved and the vomiting ceased. The stomach as mapped out at this time extended to within one inch of the symphysis pubis, the lesser curvature was two inches above the umbilicus. All food was stopped by the mouth and nutrient enemata were given. Gastric lavage was practiced three times in every twenty four hours, strychnin and digitalin were given hypodermically, normal salt solution was given by rectum and hypodermically. A firm abdominal binder, with a large pad of cotton, was applied in such a way as to press the stomach upward and away from the lower abdomen. The patient did not vomit after the first lavage, the material washed from the stomach gradually became less in amount and lost its dark greenish look, but for several days the general condition resembled one of profound toxemia with extreme prostration.

He was at times delirious and the evacuations were involuntary. It became impossible on the third day to feed him by the bowel, because of failure to retain the enemata, and rice water in small amounts (3ss iii) was given cautiously by the mouth. This was retained. Albumin water and milk were later given in small amounts. The record for February 22 is as follows: "The lungs show advancing resolution. Stomach tube passed and about 600 c.c. of bright green fluid obtained. Lavage. Distended with air, the lesser curvature is three fingers above the umbilicus, the greater, one hand's breadth below. Tongue heavily coated, eyes bleary and sunken, mind wandering, pulse regular, fairly full, heart tones strong. Leg, of which patient complains, negative, no thrombophlebitis to be made out."

At this time small, loose, greenish stools were passed two to five times a day. The record of February 25 shows: "The mind clearer, tongue less dry. Right lower lobe nearly clear, right upper seems slow in clearing, is still quite dull, respiration harsh, many coarse, moist râles. The same coarse râles are heard over the left lower lobe, though there is little dullness here. The pulse is quick to day. Sputa yellow, viscid, slightly offensive, an occasional rusty streak. Stomach outlines as on February 22."

February 28 "On percussion stomach seems to reach one half inch below umbilicus. Lesser curvature higher than before."

March 8 "Urine 2,400 c.c., specific gravity 1010, no albumin, no casts."

Result—More and more food was gradually allowed, and the slow but steady improvement was uninterrupted. When the patient left the hospital, March 16, his stomach was about normal in size, but still showed a distinct prolapse. When heard from a few months later from his home in Maryland he reported himself as feeling entirely well.

Remarks—An analysis of the stomach contents obtained February 19 showed them to be thin, of dark greenish color and containing many fine shreds. There was a faint acid reaction to litmus. Congo red showed no change. Total acidity was 18, no free HCl. No lactic acid. Bile present. No mucus, pus, erythrocytes or leucocytes. Some starch granules, considerable fat. Many short bacilli. On February 22, one and one-half hours after taking milk, an analysis showed dark greenish fluid containing a few curds. Litmus, slightly acid. Congo red, no change. Töpfer's reagent, no change. Total acidity, 20. Bile present. No blood or pus.

A second case of acute dilatation of the stomach was seen several times with a surgical colleague, in whose practice it occurred and who has kindly furnished me notes of the case.

CASE 2—A woman, aged 55, weighing about 130 pounds, mother of several children, had had for nine years, with varying frequency and severity, attacks of colic, evidently due to gallstones. She had never been jaundiced.

Operation—Operation was performed Oct 20, 1904, the gall bladder with 142 stones was removed. A rubber drainage tube packed with gauze was introduced into the wound. The common duct was not touched, further than to assure the operator of the non existence of common duct stones. At the same sitting a diastasis of the abdominal recti muscles was relieved by freshening the edges of the muscles and uniting them by sutures. It was noted by the operator that the stomach was in its usual position and was not larger than normal, and the region of the pylorus and duodenum was examined for the presence of adhesions, but none was found. The patient left the operating table in fairly good condition. Nine ounces of ether were used for anesthesia, which lasted one hour and thirty five minutes. Nitrous oxid gas was used at the very beginning.

Postoperative History—For about twelve hours after the operation the patient, who had promptly regained consciousness, complained of pain in the abdomen and vomited often, each time bringing up a small amount of light greenish liquid. The vomiting then ceased for twelve hours. Then, with complaint of more pain with increase in pulse rate to 158 and evidence of great prostration, vomiting began again, the vomitus now being a dark brown liquid. The patient's eyes were sunken, the tongue dry, voice feeble and husky. There was fetor ex ore. The pulse was small and feeble, the temperature ranging from 99 to 101°. The abdomen was distended, tender only near the wounds. The stomach outlines were clearly made out, showing the greater curvature half way between the umbilicus and symphysis pubis. A succussion sound was plainly heard and the splash of the fluid could be felt below the umbilicus.

Under gastric lavage, rectal feeding, hypodermoclysis and stimulants, there was marked improvement, lasting three days. The tube and nearly all the gauze had been removed, but on October 29 she again became very restless, was nauseated, complained of increased pain and vomited a quart of thick, blackish, offensive material. The pulse rose to 138, the prostration became extreme. In spite of lavage, stimulants, use of salt solution by rectum and hypodermically, she gradually failed and died November 3, fourteen days after the operation. No autopsy was permitted.

Remarks—The stomach contents, analyzed several days before operation and after the occurrence of the acute dilatation, never contained any free HCl except once, when the acid was being given by the mouth. After a test breakfast, October 18, there was a total acidity of 8. A full meal used as a test for motor insufficiency showed, October 17 and October 20, no retention. After seven hours but 5 c.c. of contents could be obtained. The stomach contents after dilatation occurred showed (e.g., test of October 30) a dark, greenish black fluid of foul odor, specific gravity 1020. The reaction was alkaline. No blood or bile could be found by chemical tests. A few red cells and leucocytes with much mucus and some epithelial cells were found on microscopic examination. No Oppler Boas bacilli were found, but there were myriads of other microorganisms of various forms.

In this case the possibility of acute obstruction at the pylorus or the duodenum was thought of, but the removal of the tube and packing gave no relief, and there was a lack of peristalsis such as one would expect with such an obstructive dilatation. It is to be noted that ether and not chloroform was the anesthetic in this instance. In most respects this case resembles the other recorded postoperative cases. The pain, prostration, vomiting of large amounts of dark fluid, the great size of the stomach, the temporary improvement for three days and death in the second week are all as in most other reports of the same accident.

SYMPTOMS

Comparing these two cases with others that have been reported, they are found as regards *symptoms* to be typical in most respects. The onset of acute dilatation is sudden. There may be complaint of pain or discomfort in the abdomen. This pain may be severe. The vomiting is quite characteristic, brown, grayish, greenish or black, large in amount, and may be offensive. It seems almost to run out of the patient's mouth rather than to be forcibly ejected. Henry Morris says that it comes up in "large gulps without straining." The urine is scanty, the bowels loose or constipated. The temperature is often subnormal, the skin cold and clammy, the pulse small and rapid, thirst is extreme, in short, there is the picture of collapse.

The abdomen, especially the lower half, is distended, though it may be flat if the stomach be well emptied for the time being through free vomiting. Peristalsis, even slight as in my first case, has been rarely reported, an argument advanced by some to disprove the theory of pyloric or duodenal obstruction as a causative factor. The percussion note is drum-like over the gas-containing part of the viscus and flat over the fluid. Fluctuation and the succussion sound are clearly made out, the stomach tube withdraws a large amount, sometimes several pints, of brownish, greenish or blackish, rather thin or gruelly fluid. This fluid generally contains bile, perhaps pancreatic juice and some altered blood. Free HCl, as a rule, is lacking, lactic acid has been found several times. The odor is often offensive, almost never feculent. The gas that escapes through the tube or by belching is often abundant and may be of foul odor. H_2S has been found in it in one or two instances. The stomach, with or without the aid of distension by air injected through the tube, can be outlined as greatly enlarged, extending "even to the symphysis" or "filling the entire abdomen from diaphragm to symphysis." The abdomen flattens in contour as the fluid and gas are withdrawn by the tube.

DIAGNOSIS

Diagnosis is not as easy as one might think. Peritonitis, either general or local, intestinal obstruction, pancreatic cyst, uremia, postanesthetic vomiting, acute pancreatitis are all to be considered. Of especial value in diagnosis is the succussion sound, and the examination by the stomach tube revealing the characteristic fluid and the enormous size of the stomach. Diagnosis in one case was made when an exploratory puncture through the abdominal wall for suspected pus, the result of the supposed peritonitis, revealed the greenish stomach contents. The writer in this case explains the failure to recognize the existence of dilatation by the simple signs of fluctuation and succussion as due to the fact that, through fear of breaking up possibly existing recent adhesions, he did not dare shake the patient, etc. This sounds much like an *ex post facto* reasoning. Surely a palpation and percussion of the abdomen sufficient to test for fluctuation, or a shaking of the patient, or, better still, of the bed, to bring out succussion is a far safer and a more rational procedure than an exploratory puncture for suspected appendicular abscess or localized peritoneal exudate from other causes.

PROGNOSIS

An extremely small number of the recognized cases have recovered. I believe my case is the first reported case of recovery in which acute dilatation has complicated pneumonia or pleurisy.

Thomson refers to seven cases of recovery. I am ac-

quainted with recovery in the practice of a surgical colleague in a case following a gall-bladder operation. As Thomson says, types of more moderate severity probably occur and end in recovery so that the prognosis, if these cases were more accurately recognized, would not be so grave as it is generally supposed to be. Some of the instances of late nausea and vomiting after anesthetics may be due to milder forms of acute dilatation. Death when it occurs may be within the first forty-eight hours or it may be delayed for more than a week. In general the disease runs its fatal course within a week. Relapse may occur, and intermissions of several hours with cessation of vomiting and improvement in symptoms have been several times noted.

TREATMENT

I feel convinced that treatment in my case saved the life of the patient, even though it was begun late, as the existence of dilatation was not recognized until it had lasted probably twenty-four hours.

Treatment should consist in frequent gastric lavage saline solution by the bowel and under the skin, nutrient enemata, strychnin and other stimulants hypodermically. Box and Wallace advise the use of atropin. This has been found of service in certain cases of ileus, and the resemblance of acute gastric dilatation to dynamic ileus might suggest similar treatment. Change of posture to the right or to the abdominal decubitus should be tried to relieve the possible drag of the mesenteric vessels on the duodenum or the pressure of the overloaded stomach on the same portion of the bowel. I tried a snug abdominal supporter with a large firm pad of cotton, binding it on in such a way as to push the abdominal wall and, with it, the stomach upward in the same manner that the binder is used in cases of enteroptosis. How much this accomplished it is hard to say, but it apparently helped to keep the displaced organ more nearly in its proper place. It has since occurred to me that possibly the stomach might be induced to contract by the application of ice to the abdominal wall or of hot water or even hot air put into the stomach through the tube in the same way that the inert uterus after confinement can be induced to contract through these means. It would seem to be a means of treatment worth trying. That the stomach wall has not entirely lost its elasticity and contractility has been shown by its prompt shrinking on the escape of gas when pricked postmortem, as well as by the same contraction in the wall when at operation in a few cases the stomach has been opened and emptied of its gas and fluid. Surgery—gastrojejunostomy—is advocated by Mayo Robson in intractable cases, when on opening the abdomen it is seen that there is no possibility of correcting the displacement of the viscus and in this way favoring a cure.

ETIOLOGY

Certain statistical facts can be stated concerning the etiology of this condition. It is commonest between the ages of 20 and 30. A small number have followed trauma. A surgical operation has preceded about one-quarter to one-third of the cases, and a rather strikingly large percentage of these operations has been on the gall bladder or bile ducts. The anesthetic has nearly always been chloroform. Neck saw dilatation follow a small dose of veronal. In some instances overloading the stomach is assigned as the cause—dilatation *ab ingestis*. For instance, Hoffmann² reports the case

² F. Hoffmann, Münch. med. Wochts., vol. II, No. 45, Nov. 8, 1904.

of a male, aged 18, who was a hearty eater and who bolted his food. After a large meal, including several good-sized pickles, pain and vomiting occurred, on the sixth day ileus with peritonitis and encapsulated exudate was diagnosed. Laparotomy was performed. There was no peritonitis, the stomach was found enormously dilated and on being opened six liters of fluid, with pickles, escaped. A Fraenkel³ reports the case of his own child of 6 who after eating freely of peas, suffered from a typical acute dilatation, recovering only after six weeks of serious illness.

In a number of cases, some other lesion than the dilatation has been found and is regarded as the cause or at least as a contributing factor. Of Thomson's 44 cases, one was associated with empyema, three with pleurisy and pneumonia and one each with typhoid, scarlet fever and an obscure fever. Brown⁴ saw a case in a choreic girl. A Fraenkel³ reports a case in an anemic girl with hemorrhage from the stomach. No ulcer, which was suspected, was found, but a long, vertical, dilated stomach. Fraenkel thinks anemia and atony plus food and drink may account for the dilatation.

While, therefore, trauma, surgical operation, overloading of the stomach, preceding or accompanying diseased conditions, are assigned as causes in most cases, in others no cause whatever is recognized as operating and the dilatation might be regarded as idiopathic, i. e., the cause not discovered.

GENERAL REMARKS

It is not my purpose to speculate as to the exact mode of production of acute dilatation of the stomach nor to review in detail the various theories that have been advanced to explain it. While a number of autopsies have been performed—in most of Thomson's 44 cases postmortem examinations were made—many of them are very incomplete and there is no constant finding save the greatly distended stomach with its contents of gas and fluid and commonly submucous hemorrhages and erosions. In several instances the dilatation has included not only the stomach, but also that part of the duodenum above the crossing of the superior mesenteric vessels. Only a few microscopic examinations of the wall of the stomach have been made, the nerves, the vagi and splanchnic, have been practically overlooked, bacteriologic and chemical examinations of blood and stomach contents are scanty, only occasionally is the condition of the pancreas noted with care, so that one sees that there is much light that might be thrown on the subject by carefully conducted complete autopsies.

More careful observations have been made as to gross conditions that might cause obstruction at the pylorus or in the duodenum. The fact that several cases have followed operations on the bile tract, such a close neighbor of the duodenum, makes one think of the possibility of pressure on this part of the intestine by drainage tube or exudate as a possible cause, or of the extension of inflammation to the duodenal or gastric wall. Albrecht⁵ and others have drawn attention to the pull and pressure of the superior mesenteric vessels on the underlying duodenum, particularly when the small intestines were low in the pelvis and by their dragging weight pulled these vessels taut. Several observers have found, by necropsies and by experiment, evidence sufficient to make them adherents of this theory. Still

others believe that the overloaded stomach itself presses on the duodenum and so really obstructs its own outlet, and the enlarged, overloaded viscus pushes the small intestines downward, increasing the pull on the superior mesenteric vessels and thus still further adding to the obstructive force that is blocking its outlet. We thus have an illustration of the vicious circle of causes so frequently seen in conditions of disease.

Kelling⁶ has advanced an additional theory and he is supported in this by Braun⁷ and Seidel. Kelling bases his belief largely on experimental work on dogs. A simultaneous closure of the duodenum and cardia would result in an overdistension of the stomach and in the accumulation of fluid and gas. A valve-like fold in the lower esophagus opens by active contractions of the gastric musculature. If for any reason, as through inflammation of the wall of the stomach or defective innervation through abnormally acting vagi or other nerves these muscles became incompetent, and at the same time if a kinking of the duodenum were to occur—and Kelling finds that it may—the condition would be ripe for an overdistension and hypersecretion, or more properly a hypertransudation from the wall of the stomach, i. e., the contents could escape through neither pylorus nor cardia. If the kink in the duodenum is below the opening of the common bile duct, bile and pancreatic juice will, of course, be constituents of the gastric fluid. Kussmaul⁸ long ago called attention to these duodenal kinks.

Some adhere to the theory of a sudden toxic paralysis—e. g., through the poison of an infection, local or general, or perhaps chloroform—of the wall of the stomach permitting of abnormal hypersecretion, the accumulation of gas arising from fermentation or expired, as it were, from the vessels in the wall of the stomach (?), the paralysis permitting the yielding of the wall of the viscus and preventing peristalsis vigorous enough to cause the emptying of the organ *per vias naturales*.

To all of these theories there is some objection that can be raised. Either the theories are wrong or acute dilatation of the stomach may arise from more than one cause and thus permit more than one explanation.

It is, perhaps, idle to speculate, yet it seems as though some involvement of the nervous or muscular apparatus of the stomach wall in inflammatory or toxic change must be present to account for the enormous amount of transudate and gas, the great size of the stomach whose walls seem parietic, and for the alarming and too often fatal condition resembling profound toxemia. Mechanically obstructive causes may be operative, as the numerous observations go to show, but that they are primary or that they are the sole causes is not proved.

As I have said, more careful histologic, chemical and bacteriologic examinations are necessary before the pathogenesis of this condition shall be made clear, and more attention should be given by the clinician to noting the condition of the stomach as regards location and size before and during operations and at the beginning of infectious diseases. A previously existing gastroparesis might predispose to acute dilatation. So too, the condition of the stools during these attacks might show whether or not the same peculiar blackish material found in the stomach is present in the lower bowel, and in this way throw some light on the possible presence of duodenal obstruction.

6 Kelling "Verhandl. d. Deutsch. Gesellsch. f. Chir.," 1901

7 Braun "Deutsch. med. Wochtsch.," 1904, p. 1553

8 Kussmaul: "Die Peristaltische Unruhe des Magens." Volkman's Samml. klin. Vortr., 1880, No. 181

3 A. Fraenkel "Deut. med. Wochtsch.," 1894, No. 8, p. 155

4 Brown "Lancet," April 19, 1890

5 Albrecht "Virchow's Archiv," vol. civ

HEAD INJURIES ACCOMPANIED BY INTRACRANIAL HEMORRHAGE *

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As house surgeon at the Emergency Hospital, it has been my privilege to see and to attend a large number of head injuries, of which some have been very serious. The attitude of some of our best surgeons regarding early operative interference in these cases has prompted me to write this article, the purpose of which is to bring out a few points in the treatment of head injuries accompanied by intracranial hemorrhage. The point which I wish to emphasize is the necessity of prompt surgical interference under certain conditions and the probable result when the surgeon waits for the development of focal symptoms. As an illustration, I wish to cite three cases which were recently treated at the Emergency Hospital. For these cases I am indebted to Drs. Bading and Reineking attending surgeons to the hospital.

CASE 1—On Feb. 22, 1905, about 1 p. m., C. A. B., male, aged 27, was brought to the hospital by the police. He was profoundly intoxicated when admitted and it was thought that he had fallen down a flight of stairs, but no definite history was obtained, as the man was a stranger and without friends.

Examination—This showed a superficial laceration of the scalp about one inch long over the left parietal eminence, a small laceration over the right eye and a slight dilatation of the right pupil, which was uneven and reacted slowly to light. The man's pulse was 62, temperature 97.4 by rectum, respiration 24. He vomited several times soon after entrance.

Hospital Record—The patient was put to bed for observation. For several hours he was very quiet and the effects of the liquor did not seem to pass away. About 2 a. m. I was called by the nurse, who had noticed a twitching of the muscles of the left hand and forearm, followed by a rigidity of the extremity. Soon afterward the lower extremity on the left side became similarly affected. Later the right side became involved. There were frequent muscular twitchings, followed by a rigidity of the extremities. At 6 a. m. I was again called. The same conditions were present, but were more noticeable. The pulse at this time was 124, temperature 101.6 in the rectum, respirations 36. It was thought that this might be a case of skull fracture with cortical laceration, and an expectant line of treatment was advised. There was a gradual rise in the pulse, temperature and respiration, and during the second night the pulse was as high as 180, temperature 105 in the rectum, respirations 40. On the following morning the man was still completely comatose. He grew gradually worse and died at 3 p. m. February 24, fifty hours after admission, the temperature going above 107, while the pulse could not be counted.

Autopsy—On the following day a postmortem was held and the findings were as follows: There was a fissured fracture of the skull on the right side, extending from the squamous portion of the temporal bone to the occipital protuberance. There was a rupture of the middle meningeal artery with an immense subdural clot practically covering the right hemisphere.

CASE 2—C. B., male, aged 32, jumped from a moving street car on the morning of July 14, 1905, and was brought to the hospital at 7:50 a. m.

Examination—There was a slight laceration over the olecranon process on the right side, and it was to have this wound dressed that he was brought to the hospital. He complained of severe pain in the head and was somewhat dazed. Examination of the head showed a contusion of the scalp over the right parietal eminence, but no abrasion.

Hospital Record—He was put to bed and his condition rapidly grew worse. He was very restless, complained of pain in the head, vomited, and his pulse became full and slow.

Within six hours he became very restless and delirious, pulse 44, temperature 98.8 by rectum, pupils equal and reacting slowly to light. There was twitching of the muscles of the right upper extremity, followed by rigidity. Twelve hours after admission his pulse was 68, temperature 100.4 in the rectum, respirations 24. There were frequent twitchings of the muscles of the extremities of both sides, followed by rigidity of the same parts, but at no time was there paralysis. During the night he steadily grew worse, and at 10 a. m. on the following morning his pulse was 142, temperature 103.2 by rectum, respirations 47. The respirations were snoring in character and he was becoming cyanotic. His pupils were equal, but sluggish. He was in deep coma, but there was no paralysis, nor were focal symptoms present. It was thought that this was a case of intracranial hemorrhage and that operative interference was indicated. Accordingly the patient was prepared for operation.

Operation and Result—The question arose as to where the skull should be opened. It was decided to open on the right side, since there was a contusion of the scalp on that side, and if hemorrhage was not present an opening was to be made on the opposite side. An incision was made over the motor area on the right side, and when the skull was exposed a fracture was found. It was not depressed and was about four inches in length, following closely the direction of the squamous suture. A trephine opening was made and an extradural clot was exposed. The opening was enlarged and the bleeding vessel found. It proved to be a posterior branch of the middle meningeal and a ligature was applied. The clot, which was very large, extending over the greater portion of the right hemisphere, was removed. As soon as pressure was relieved the breathing became better and the patient improved rapidly in every way. Even before he left the table the change was noticeable. Within four hours after his removal from the operating room he answered questions and apparently knew what was going on about him, although he had been profoundly unconscious for the preceding eighteen hours. Twenty-four hours after the operation his pulse was 120, temperature 101, respirations 40, and he was perfectly conscious. He made an uneventful recovery.

CASE 3—On Aug. 28, 1905, at 8:30 a. m., B. H., an Austrian, aged 47, was brought to the hospital from the county jail. **History**—He was able to talk a little, but not rationally, and no definite history could be obtained. It was learned that on the afternoon of August 27 he had been found lying near the street car track outside of the city limits. The sheriff had been notified and the man was brought to the county jail, where he remained over night.

Examination—He had the appearance of having been drinking heavily. Examination showed that the left upper extremity was rigid and the forearm flexed to a right angle. The patient did not know whether or not he had been injured, and there was no evidence of any traumatism except two small areas of ecchymosis over the left thigh. His pulse was 48, temperature 99 per rectum, pupils equal.

Hospital Record—From the above history and symptoms present a positive diagnosis was not made at this time, although the case appeared to be one of intracranial hemorrhage, probably the result of an injury. He was put to bed for observation. On the following day his condition was not so good. The right pupil was slightly dilated, the left upper extremity still remained spastic, and there were frequent twitchings of the muscles which were not present on the preceding day. The lower extremity on the left side had also become rigid. He refused all nourishment, his mental condition was not so good, and he passed both urine and feces involuntarily. At 4 p. m., August 29, his pulse had risen to 80, temperature 100.6 by rectum, respirations 30.

On the second day following his admission his condition had become much worse. His pulse was 104, temperature 102 by rectum, respirations 36. Both the upper and lower extremity on the right side had become rigid, with twitchings of the muscles from time to time. The left side remained in the same condition, but more marked. The man was completely comatose, his respirations stertorous and he was cyanotic.

* Read at the meeting of the Milwaukee County Medical Society 1906

Operation—At this time it was decided that the patient's condition warranted opening the skull, and accordingly he was prepared for the operation. The entire head was shaved, but no evidence of any injury whatever could be found on the scalp.

At 4 p m that afternoon he was anesthetized, he required but little anesthetic. An incision was made in the scalp over the motor area on the right side. No fracture was found, and an opening was made in the skull with a trephine. The dura was bulging, but did not pulsate, and when incised a large amount of dark fluid blood escaped. The quantity is not known but there remained a large cavity, extending almost over the entire hemisphere, and at the opening of the brain was separated about one inch from the skull. Such a quantity of blood would cause great intracranial pressure. There was no active bleeding, nor was any clot present. The cavity was irrigated with salt solution and the wound closed with drainage.

Result—There was a marked improvement in the character of the respirations immediately following the operation and the cyanosis disappeared. During the night the pulse was 120, temperature 103 in the rectum, respirations 40, and the patient restless. On the following day there was a decrease in the pulse, temperature and respirations, and his mental condition was much improved. He talked freely, but did not seem entirely rational for four days after the operation. He could give no history of any injury, but thought that he had fallen, striking his head. At times he complained of severe pain in the head on the right side and did not want to be disturbed. He remained in the hospital about two weeks and was then transferred to another institution. Unfortunately, an abscess developed within the skull anterior to the opening and prolonged his stay in the hospital, but he made a complete recovery. While it is to be regretted that an infection occurred in this case, yet it is a good illustration of the fact that serious results do not necessarily follow an intracranial infection.

From a study of these three cases which are similar, the one patient treated expectantly, the other two operated on, we can see that the diagnosis of intracranial hemorrhage does not depend on the development of local symptoms. In none of these cases did a hemiplegia occur. Local symptoms are due to a local lesion and extensive compression of the brain does not necessarily produce local symptoms. Park states that when intracranial pressure has reached a certain point epileptiform convulsions result, varying in intensity, affecting all the limbs and terminating perhaps with rigidity, and that such a condition is an expression of high pressure within the cranium. That paralysis does not necessarily follow rupture of the middle meningeal artery is well illustrated by these cases. An article on the diagnosis of hemorrhage from the middle meningeal artery by Dr C H Lemon has appeared in a recent issue of the *Wisconsin Medical Journal*. He dwells on the importance of an early diagnosis and active interference and emphasizes particularly the character of the pulse and respirations. A slow pulse which later becomes rapid and a marked increase in the respirations which become stertorous are the two most important symptoms. In a case with a history of injury to the head and in which the patient is unconscious, if these two symptoms are present, we know that the intracranial pressure is increased. The most probable cause of this increased pressure would be hemorrhage or a depressed fracture. The latter is easily excluded. Usually the patient becomes cyanotic and there is frequently a dilatation of one pupil, but this sign is not reliable. The period of consciousness between the accident and the persistent coma is recognized as a very important symptom of intracranial hemorrhage. In only one of these cases, however, was this symptom distinct.

One point that deserves emphasis is that in all of these cases both sides of the body were similarly involved. It is true that the side opposite the lesion first showed symptoms of irritation, but the same condition was soon present on the other side. In Case 3, no sign of injury could be detected after shaving the entire head, and this case shows clearly that very serious damage may occur within the skull with absolutely no evidence of external injury. For several days this man's friends could not be located, as he had given another name on admission to the hospital, and when they were found they knew nothing regarding the case except that he had been missing for several days. In this respect, the case is unusual, as in almost every case some history of the patient can be obtained. In this case the diagnosis was based chiefly on two symptoms, a slow pulse and the spastic condition of the arm. The one indicative of pressure, the other of irritation.

As regards treatment the question arises, when should an operation be advised? In looking over the textbooks on general surgery I find that they nearly all state that operative interference should not be undertaken until focal symptoms develop. This, I believe, is wrong. That focal symptoms do not always develop is clearly shown by these three cases. If the hemorrhage is small and is confined to the motor area local symptoms will probably develop, but if the hemorrhage is large these symptoms may be absent. One point which I wish to emphasize is that the absence of focal symptoms does not mean that hemorrhage is not present. It is largely due to the absence of focal symptoms, I think, that an early positive diagnosis is not made in such cases. I believe that an operation is indicated when there is a history of injury to the head followed by loss of consciousness, if the patient has a persistent slow pulse, that is one of fifty or under, later becoming rapid, and is gradually growing worse. Certainly there is less danger to such a patient in trephining the skull than in treating him expectantly. This statement is borne out by statistics. Weisman collected 257 cases. Of these 147 were treated expectantly, with 131 deaths, while of 110 cases in which operation was performed only 30 died. Von Bergman cites 143 cases treated expectantly, in only 12 of which the patients recovered, a mortality of over 90 per cent. With these figures before them, I can not understand why many of our best surgeons hesitate about operating in such cases. Certainly these men would not hesitate about doing an appendectomy, but would urge it if the case were an acute one. They would not hesitate regarding an exploratory laparotomy for diagnostic purposes, why, then, should they delay trephining the skull for the same purpose if the patient is in danger? Under aseptic conditions, the chances of infection following trephining are certainly no greater than following a laparotomy, and yet the surgeon who would urge this operation hesitates when the question arises of opening the skull. No doubt a number of these patients will die whether operated on or not, but I believe that many more could be saved by prompt surgical means.

Park cites a case in which Parker, in 1877, opened the skull for hemorrhage and, not finding it, opened on the opposite side, removing a large clot, and saw his patient restored to health. To use his own words, "this was considered a very bold procedure," but if we had more men of like mind to-day many patients could be saved who otherwise would die of neglect.

THE NEURONS*

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I INTRODUCTION

I have been invited to speak on the subject of "The Neurons" and to outline to you the present state of knowledge concerning them. No topic has led to more animated discussion, perhaps, during the past ten years. Indeed, the word "neuron," which sprang so immediately into vogue after its introduction by Waldeyer in 1891, appears to have excited, by virtue of its rapid and widespread popularity, a feeling of bitter hostility, of unrelenting antagonism in certain circles. Hailed at its advent as the simplifier and revolutionist of our knowledge of the nervous system, and enthusiastically adopted by teachers of anatomy, physiology and pathology, the neuron doctrine has in subsequent years been subjected to the fiercest of assaults, not only has the truth of its tenets been questioned, its adversaries even go so far as to designate it as "a real danger to science."

The neurohistologic world appears to be divided into two camps, that of the neuronists and that of the anti-neuronists. The controversy, curiously enough, has been a rather one-sided affair, though by no means wholly so. The so-called "neuronists" have spoken and written of the nervous system as a mass of nerve units or neurons and have devoted themselves chiefly to observations and experiments concerning the internal and external morphology of these units, their relations to one another, and especially their arrangements in chains and groups, and the relations of such chains and groups to function in health and in disease. With few exceptions they have refrained from controversy on the hypothetical side. The so-called anti-neuronists, on the other hand, while they have made some admirable contributions to real knowledge, have devoted a remarkable amount of time and energy to polemical writing, one of them is the author of a book of nearly 500 pages in which few new facts, if any, are brought forward, the whole volume being given over to a condemnation of the neuron doctrine and a denunciatory arraignment of its supporters. In the writings of the anti-neuronists such statements as "the neuron theory must be abandoned," "the neuron theory can no longer be held," "the neuron doctrine is false through and through," "ueber der Neurontheorie der Stab gebrochen ist" are reiterated monotonously. That the argument has become very heated at times is shown by some sample statements which I select at random from the writings of the controversialists. One of them refers to the neuronists as the "Golgi band", another anti-neuronist belittles the work of a great investigator who denies networks of extracellular neurofibrils between the neurons in leeches by stating that his results are due "wholly, certainly, to the incompleteness of his preparations", to this a neuronist has replied that "such an expression is not only very conceited, but also very partisan and juvenile." Another strong opponent of the neuron doctrine speaks of the period since when "the ominous neuron theory has animated only those who are biased." Still another remarks that "no one with normal vision can escape the

convincing impression of Apathy's specimens, provided his eye is not dimmed by envy or injured vanity." And, finally, though I could weary you with examples, Nissl states that Ramón y Cajal "is not competent to pass judgment on histologic questions," an opinion perhaps influenced by Ramón y Cajal's criticism of Nissl's "nervous gray," which he declares to be nothing but a "very cheap anatomic-physiologic conjecture, which contradicts everything that the most convincing methods teach us of detail."

From controversial statements such as these only one thing is clear, namely, that those who have made them are quarreling about matters of opinion more than about matters of fact. There is no reason why bitter dispute should long continue over easily verifiable fact. Experience teaches, however, that it is those opinions which are most feebly founded in fact and are least capable of proof that mankind is prone most passionately to defend. Science ought to try to avoid controversy by emphasizing facts and by properly estimating hypotheses. Further, scientific men should know that, once involved in discussion, nothing is gained by the bandying about of personalities, on the contrary, confidence is inspired by simple honesty in work, fairness to adversaries, moderation in statement and dignity in utterance. That was a homely but sensible saying of Truthful James when he declared that

"I hold it is not decent for a scientific gent

To say another is an ass—at least, to all intent,

Nor should the individual who happens to be meant

Reply by heaving rocks at him, to any great extent"

As Mr Brander Matthews says, in his recent admirable essay entitled "Persuasion and Controversy," in reference to convincing the public, "It is not really argument which is effective, it is information." Give the medical profession a plain statement of fact, even in a technical field, and it will decide for itself. Not that discussion is unnecessary, quite the contrary. Criticism is essential to progress. As Schiller said to the thinkers and workers of his day, "Let there be strife among you, and the union will come quickly."

In 1899, in my book on the "Nervous System and Its Constituent Neurons," I tried to give an unprejudiced account of the state of knowledge at the time regarding the finer structure of the nervous system. Since then, despite the polemical activity which has prevailed, I have refrained from writing or speaking on the subject. Now, that new methods have been devised and some important new facts have been discovered, the time has come when I welcome the opportunity of reviewing once more, very briefly, the actual advances which have been made. I shall attempt, then, to-night, to pierce the dense cloud of controversial smoke which overhangs the whole neuron area in order to make as clearly visible as possible the little tongues of flame of real research hidden there. Two of these tongues are leaping high, and many think that they are likely speedily to convert the smouldering smudge of conflicting hypotheses into a brilliant blaze of fact. Ramón y Cajal lighted one of them in 1903, Ross Granville Harrison lighted the other in 1904. We shall examine them both along with other illuminating influences a little later.

II. ORIGIN OF THE NEURON CONCEPT FACT AND THEORY IN 1891

You are doubtless so familiar with the origin of the neuron concept that mere mention of the main factors will recall the whole story to your minds. It will be remembered that, after the nerve fibers and the so-

* An address delivered by invitation before the Harvey Society of New York.

* The author prefers the spelling "neurone" for the reasons given in his article on "Neurological Nomenclature," Johns Hopkins Hosp. Bull., 1896.

called nerve cells were discovered, there was long great doubt as to the exact relations of these histologic elements to one another. Wagner, in 1851, and Deiters, in 1861, had made it probable that of the many processes of a multipolar ganglion cell in the anterior horns of the spinal cord only one was directly related to a nerve fiber. In 1871 Gerlach had shown that the fibers of the posterior roots do not represent processes of nerve cells of the posterior horns, but that on entering the posterior horns they divide and subdivide until they exhaust themselves and are lost in the gray matter. The question of the relation of the sensory fibers to the motor cells of the anterior horns, so important in connection with the reflexes, remained, therefore, the subject of conjecture. Gerlach advanced the hypothesis that a continuous nerve network exists throughout the gray matter of the whole central nervous system, and that all nerve cells and all nerve fibers are thus connected with one another—a hypothesis which met with almost universal acceptance among anatomists and physiologists for the next fifteen years.

In 1886 the distinguished embryologist, Wilhelm His, began to publish his careful researches on the embryology of the nervous system. He stated in his papers that every nerve fiber is a process of an embryonic nerve cell (neuroblast), that, besides the process of the neuroblast which becomes later the axis cylinder of a nerve fiber, other so-called protoplasmic processes (dendrites) grow out, that the single nerve cells wander for considerable distances during their development from the site of their origin, that the posterior roots of the spinal nerves are the axis cylinder processes of the spinal ganglion cells which grow into the cord, and that the anterior roots of the spinal nerves are outgrowths of axones of anterior horn cells, these outgrowths becoming subsequently covered by extracentral neurilemma cells. Most important was his idea that every nerve cell with its axis cylinder process and protoplasmic processes is a single cell, separate at the beginning from all other cells and from any end organ, connections with other nerve cells or with any end organ, like muscle or gland, His declared, either do not exist at all or, if they exist, arise secondarily. Embryology and embryologists were not so highly valued in 1886 by the rank and file of anatomists and physiologists as they are to-day, and His' remarkable studies made but little impression on the strongly held hypothesis of Gerlach. As a result of pathologic anatomic considerations, especially those bearing on experimental degenerations and the resulting sharply circumscribed areas of degeneration, Forel, in 1887, came to conclusions similar to those of His and opposed to those of Gerlach and the dominant school of the day.

It was not, however, until 1888, when Ramón y Cajal began to make his striking publications of results obtained by the then little-known method of Golgi applied to the study of the embryonic nervous system, that the histologic world became convinced of the value of the ideas of His and Forel. Stroke after stroke of confirmation with the method of Golgi, which put a delicate black crust of silver over the outside of the nerve cell and each one of its processes, no matter how delicate, followed in different parts of the world. von Kolliker, von Lenhossek and Edinger in Germany, van Gehuchten in Belgium, Retzius in Sweden, Schafer in England, Berkeley, Starr, Strong and others in America, repeated and extended the researches of Ramón y Cajal. Though the method is applicable satisfactorily only to embryonic

tissues, its results were confirmed, in the main, especially by Dogiel and Retzius, in the tissues of the adult by the method of Ehrlich.

By the use of these two methods a newly recognized anatomic unit stood out, clearly visible in the tissues. To call it nerve cell was a little confusing, as that term had already been applied to the cell body in the gray matter independent of the related axis cylinder process. This unit included not only the old nerve cell with its dendrites, but also its axis cylinder process and all the collateral and terminal ramifications of the latter. Waldeyer¹ suggested that it be called neuron, a name which speedily found its way in all languages, including our own. Waldeyer's article, an admirable collective review of the researches in histology, embryology and pathology, undoubtedly had great influence in quickly popularizing the neuron conception. A definite anatomic fact had been established, viz, the possibility of demonstrating in embryonic tissues by Golgi's method, and in adult tissues by Ehrlich's method, a hitherto nondemonstrable unit in anatomic structure. On the basis of embryologic and pathologic work—which was brought into relation with this fact, a body of doctrines, often called the neuron doctrine, was built up. A sharp distinction between the *fact* and the associated *doctrine* should be borne in mind, for much of the subsequent dispute has been due to neglect in this regard.

The associated neuron doctrine included a number of statements which at the time could be regarded as possibilities only, not as established facts. As it was formulated, it may be summarized somewhat as follows. A diffuse nerve network, in the sense of Gerlach, does not exist. There is no nerve fiber independent of a nerve cell, every nerve fiber, no matter where situated is to be regarded as the process of a nerve cell. A nerve cell with all its prolongations (dendrites and axon) constitutes a nerve unit or neuron. These nerve units are independent of one another. They are related to one another histologically and physiologically, not by continuity, but by contact, they are not united with one another anatomically or genetically. The whole of the nervous system, exclusive of blood vessels, glia and ependyma, consists of nerve units or neurons superimposed on one another. The neurons are so arranged that a nerve impulse in a given neuron always follows in one direction, it passes from the dendrites to the cell body, from the cell body to the axis cylinder process and thence to the dendrites of another neuron. All parts of a neuron are dependent on the nutritive influence of the nucleus of the cell body. The whole neuron, axon, as well as cell body, is derived from a single body cell. When a nerve fiber degenerates as a result of severance of connection with the cell body, regeneration of the axis cylinder takes place by outgrowth from the central end—see the mass of doctrines and hypotheses clinging by their tendrils to the supporting pole of anatomic fact! Here we have not only the neuron which everybody can see who looks for it but several neuron theories which were still more or less speculative, including (1) the Cellular or Neuroblast Theory, (2) the Theory of Regeneration of the Peripheral Axon Solely by Outgrowth from the Central End, (3) the Contact Theory, (4) the Theory Denying Extraneuronal Nervous Structures, and (5) the Theory of Dynamic Polarity of the Neurons.

¹ Waldeyer, W. "Ueber einige neuere Forschungen im Gebiete der Anatomie des Centralnervenssystems." Deutsche med. Wochts., Leipzig, 1891, xvii, pp 1244, 1267, 1287, 1331, 1352.

III THE DISCOVERY OF THE NEUROFIBRILS FACT AND THEORY IN 1899

I choose 1899 as the next date of summary, for in the first place it was between 1891 and 1899 that the studies of Apáthy, Held and Bethe began to attract widespread attention and the theories of Nissl to excite comment,

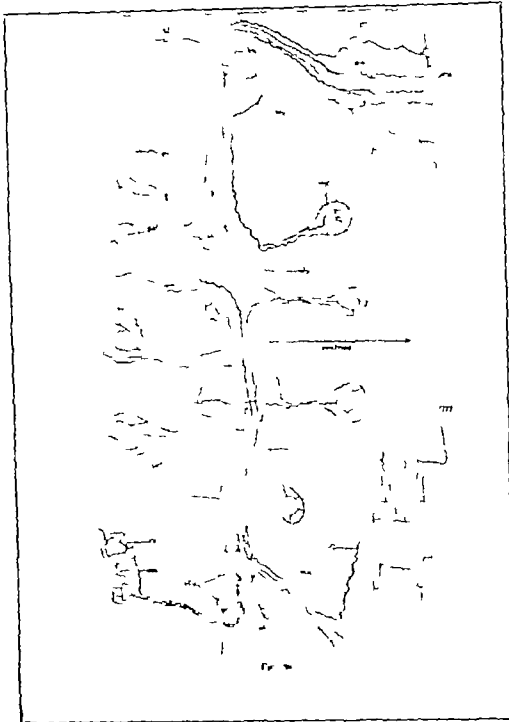


Fig 1—Apáthy's schematic representation of the course and connections of the conducting paths in a transverse section of the somite of the leech (After S Apáthy *Mittheil. a. d. Zool. Station* at Naples, 1897 vol xii plate 32, Fig 6)

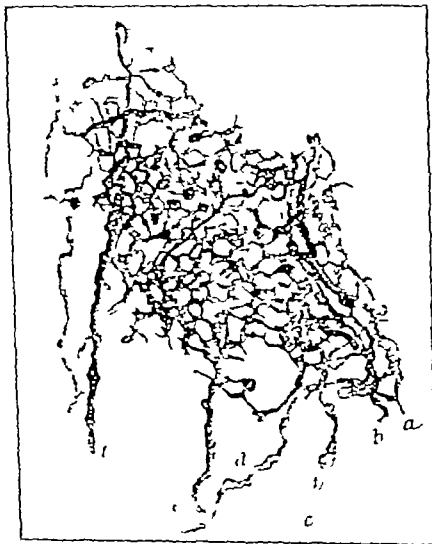


Fig 2—Part of the network around a cell in Delters nucleus. The finer network is the Golgi net. Held believed that the thickenings in the network correspond to his end feet. He believed that the axons helped to form this network. Recent investigations do not corroborate this view. The Golgi net is now believed by Held himself to be glia. (After H Held, 1897)

moreover at the end of that year I summarized in a special volume the facts and theories bearing on the neuron up to the date of its publication

The Hungarian histologist, S Apáthy,² by a difficult method depending on the use of a special variety of gold chlorid, succeeded in demonstrating in the ganglion cells of various invertebrates, especially the leech, remarkable appearances of fine lines, and, in places, of networks formed by anastomosis of these lines with one another. This discovery of Apáthy is an admirable advance, it has since been manifoldly confirmed and will always stand to his credit. Confronted by such a remarkable histologic picture as the fibrils presented, he immediately began to speculate about them and advanced the following hypotheses

(1) The neurofibrils in the nerve fibers and in the

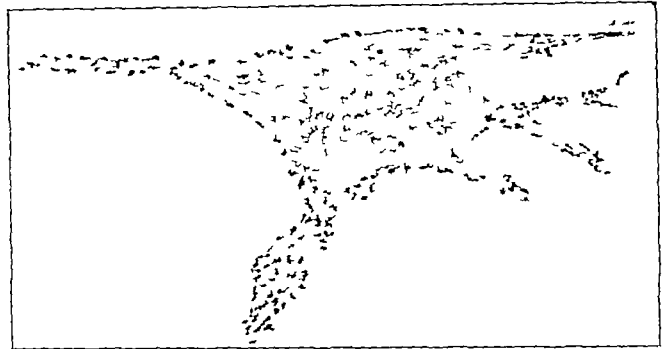


Fig 3—Cell from the ventral horn of the lumbar cord of an adult rabbit showing masses of neurosomes in the end feet terminating on the dendrites and cell body (After H Held 1897)

nerve cells are the especial conducting element of the nervous system

(2) There are two kinds of cells in the nervous system—"nerve cells" and "ganglion cells", the function of the former is to build neurofibrils which grow into and through the latter, a single neurofibril passing continuously through a series of ganglion cells

(3) In the so-called "point substance" of Leydig, in invertebrates, neurofibrils leave the nerve fibers and nerve cells and give rise to free extracellular networks of neurofibrils (Fig 1)



Fig 4.—Ganglion cells with fibrils stained by Bethe's method. A human anterior horn cell of man B cell from nucleus of facial nerve of rabbit, Nissl's bodies also shown C dendrite of a human anterior horn cell D, two human pyramidal cells (After Bethe 1900) Bethe's method showed isolated fibrils but was not delicate enough to show the anastomoses among the fibrils

2. Apáthy S. Das leitende Element des Nervensystems und seine topographischen Beziehungen zu den Zellen. *Mittheil. a. d. Zool. Station zu Neapel* 1897, vol xii pp 495 to 743

Subsequent researches have not supported these hypotheses; indeed, the weight of recent research tends to discredit them all.

The studies of H. Held³ of Leipzig took a somewhat different direction. Golgi's method had revealed around the cell bodies of neurons (1) a pericellular network which Golgi himself believed to consist of neurokeratin and (2) a pericellular plexus of the fine terminal fibers of the axons and collaterals of other neurons. Some have thought that this plexus of fine terminal fibers formed an anastomosing network—a real "pericellular net"; others have declared that the individual fibers interlaced but did not anastomose. Held studied these pericellular structures by various histologic methods and found that the terminals of nerve fibers end in delicate expansions—so-called "end-feet" (*Endfüsse*)—recognizable by the large number of minute neurosomes which they contain on the surface of the cell body and its dendrites fusing, he believed, by actual conrescence with the protoplasm. He saw, he believed, delicate connections of these "end-feet" with one another in the form of an anastomosing network, so that he advanced the idea of two kinds of interneuronal connection, (1) anastomosis of the terminals of axons derived from different neurons in a pericellular network (Fig. 2) and (2) direct continuity of the protoplasm of the end-feet with the protoplasm of the cell to which they are attached (Fig. 3).

Next in order came the researches of Bethe⁴. Everyone who had tried Apáthy's method of staining neurofibrils had failed with it, and when Bethe announced his discovery of an easier method of demonstrating them it was gladly welcomed. The method had

the advantage, further, of staining the neurofibrils in vertebrates, including man. His method showed, he asserted, independent, non-anastomosing neurofibrils running through the cell body or passing from one dendrite to another without passing through the body of the cell (Fig. 1). He regarded the neurofibrils as the sole conducting element in the nervous system. His method showed also a pericellular network which he called the "Golgi net." It seemed to Bethe probable that this Golgi net was the medium of communication between the neurofibrils of the nerve fibers terminating about the cell and the neurofibrils inside the cell, according to this

hypothesis the neurofibrils would represent a continuous conduction system throughout the whole nervous system, the so-called neurons representing, as it were, a bed in which the essential neurofibrils lie.

In 1898 F. Nissl⁵ launched his hypothesis (more fully developed in 1903) of the structure of the gray matter. He called attention to how little is really known about the gray matter, information yielded by Golgi's method not being regarded as of any value. Nerve fibers we know and nerve cells we know, but in the gray matter there must be something specific which is a mystery. This mystery he designates *neurose Grau*, or "nervous gray." He lays great stress on the Golgi nets around the nerve cells, he asserts that histologic methods leave us in the lurch when we seek to follow axis cylinders into the gray matter beyond the point where the myelin sheaths cease.

There is thus an area around nerve cells and between them and the medullated nerve fibers which is filled up with "nervous gray," for him the most important constituent of the whole nervous system. While this is all we really know, Nissl says, still we must suppose that this nervous gray is so constructed that it conducts nerve impulses and permits the reciprocal action of the elements of the nervous tissues on one another.

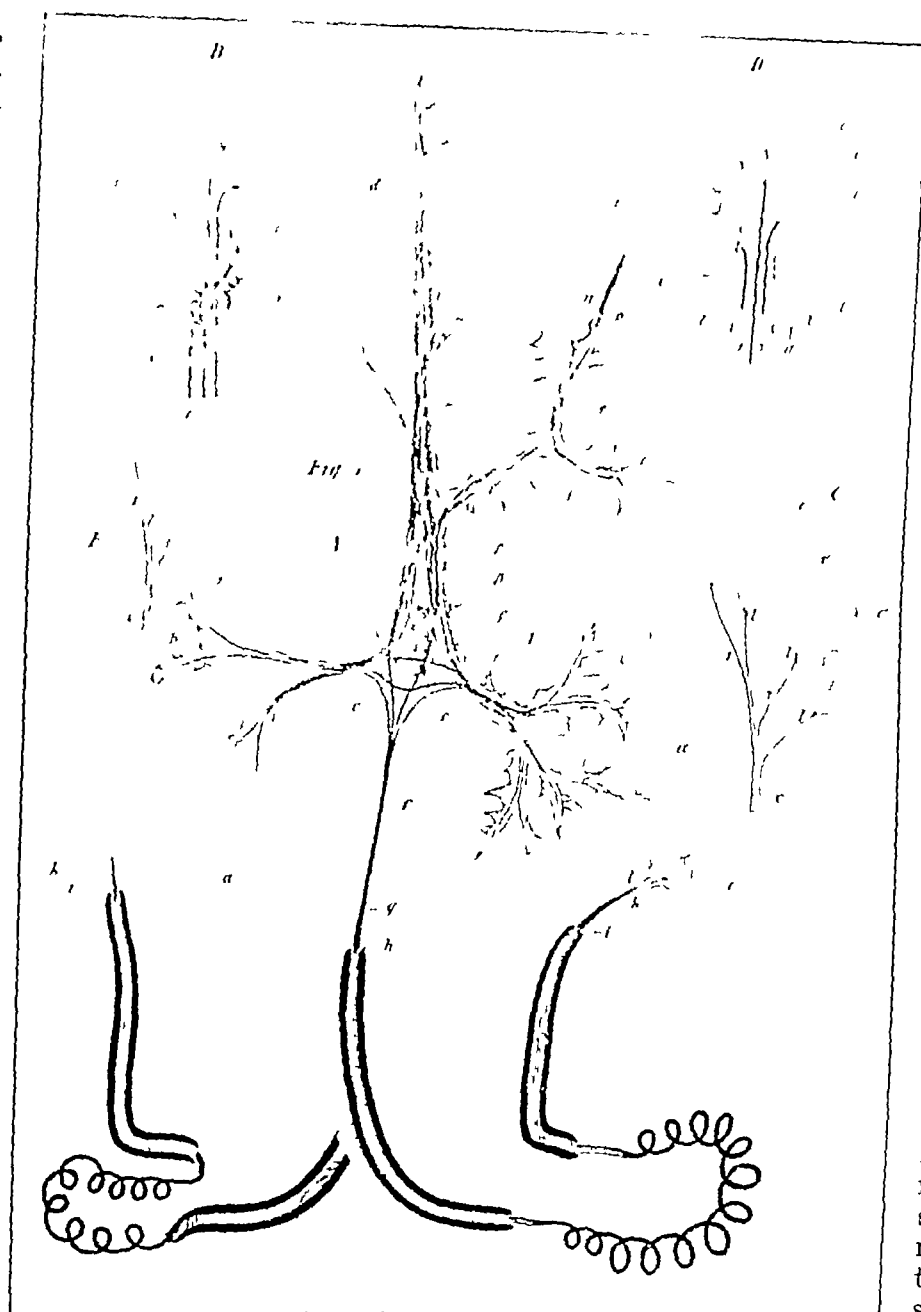


Fig. 5—Nissl's scheme of the 'nervous gray'. The left half of the scheme shows the facts as known according to Nissl. In the right half Nissl's hypothesis of the structure of the nervous gray is illustrated.

³ Held, H. "Beiträge zur Structur der Nervenzellen und ihrer Fortsätze," Arch. f. Anat. u. Entwicklsgesch., Leipzig 1897, pp. 204 to 294, also, supplement volume, 1897, pp. 273, to 312.

⁴ Bethe, A. "Ueber die Perikaryonbrillen in den Ganglienzellen vom Menschen und andern Wirbelthieren," Morphol. Arch., 1897, vol. VIII, pp. 95 to 116, also "Ueber die Neurofibrillen in den Ganglienzellen von Wirbelthieren und ihre Beziehungen zu den Golginetzen," Arch. f. mikr. Anat., Bonn, 1900, vol. IV, pp. 513 to 558.

⁵ Nissl, F. "Nervenzellen und graue Substanz," Münch. med. systems, Leipzig, 1903, pp. 1 to 488.

He has devised a most extraordinary hypothesis to account for this function of the "nervous gray" Like Bethe's theory, it involves the communication of the neurofibrils in the nerve cells by way of the Golgi nets with a great complex of neurofibrils outside the Golgi nets (Fig 5)

constituent of the nerve elements, and even if the inter-neuronal relation be a more intimate one than that of mere contact or contiguity, the essential feature of the neuron conception remains unaltered, Waldeyer having

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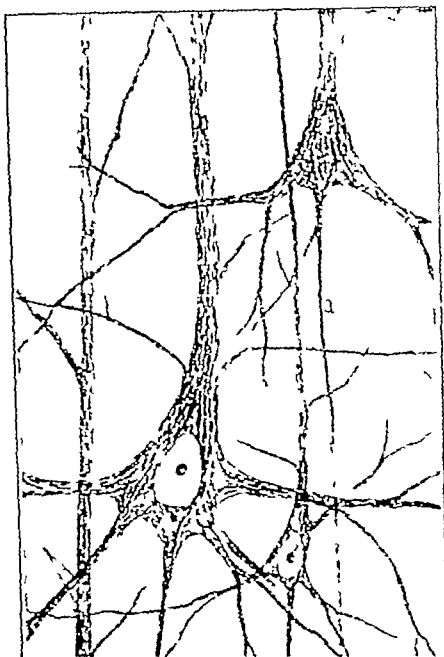


Fig 6—Large and medium sized pyramidal cells from the human visual cortex a Axis cylinder (After Ramón y Cajal 1906)

Thus far knowledge and theory had advanced by 1899 and in my book, and in an article entitled "The Unity of the Neuron Doctrine," published in that

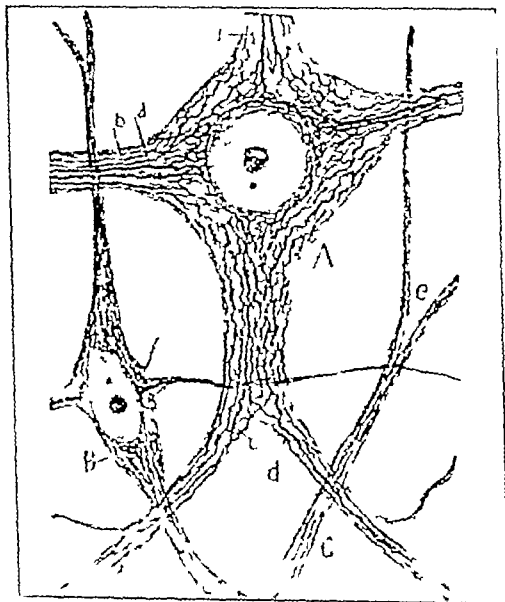


Fig 7—Funicular cells from a rabbit fifteen days old A large cell B small cell a large neurofibrils ramifying in the perinuclear network b fine neurofibrils continuous with the cortical network d c neurofibrils bifurcating on their arrival at a large dendritic trunk (After Ramón y Cajal 1903)

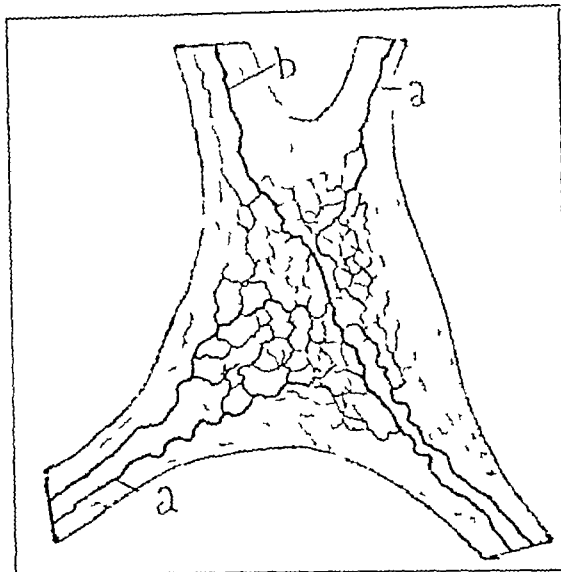


Fig 8—Large funicular cell from a rabbit eight days old Certain only of the primary neurofibrils have been drawn The network formed by the anastomoses of these filaments is well shown a neurofibrils terminating in the network b primary neurofibril running through (After Ramón y Cajal 1903)

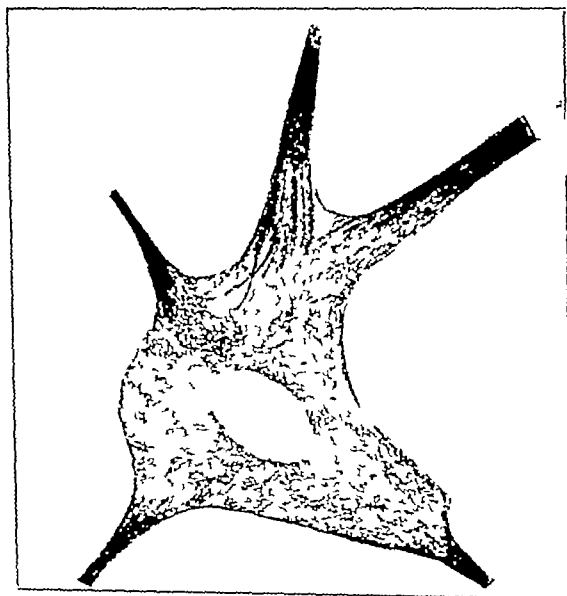


Fig 9—Cell from the spinal cord (After Donaggio)

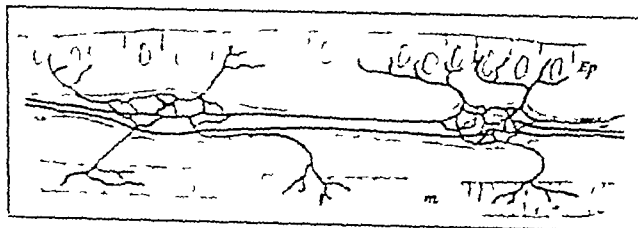


Fig 10—Scheme of the course of the neurofibrils in a nerve network in lower animals (After Bethe, 1903) Not confirmed by recent researches

ne 1899, I called attention to these phases of the subject, 1905 vol 100 of the *Journal of the Royal Microscopical Society*, Edinburgh.

Read in the Southern Section of the American Laryngological and Otological Society held in Norfolk Va 1906 the annual meeting

can still retain the nerve units. The limits between two nerve units would then always lie in a nerve network and not anatomically at least be exactly definable with our present methods. I accompanied my review, therefore, at that time, with the statement, "There may be

important that we should find out all that there is to learn about them, but that the human body is made up largely of a mass of cells, and that the human nervous system is made up largely of great numbers of cell units, the so-called neurons, would seem to be facts too firmly established ever utterly to be overthrown."

IV. MORE RECENT WORK FACT AND THEORY TO-DAY

During the next five years (1899-1904) the subject of neuro histology was enriched by a mass of detailed

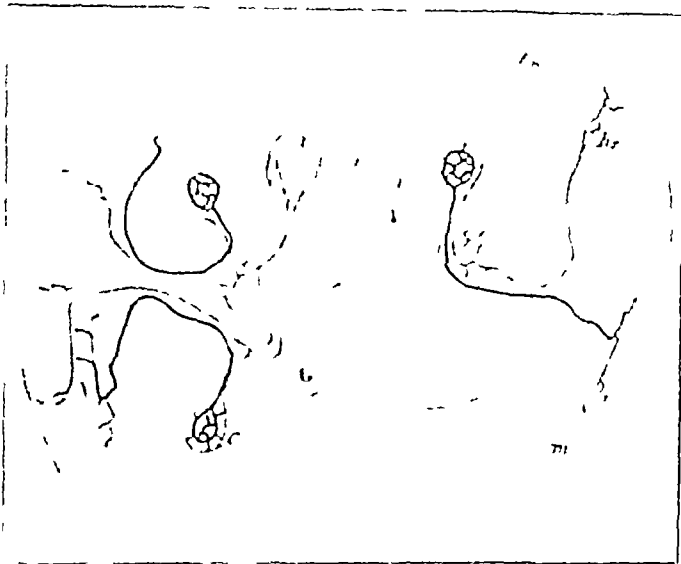


Fig 11—Scheme of the course of the neurofibrils in the nervous systems of worms. *G* ganglion, *Gz* ganglion cells, *Rz* reception cells. (After Bethe, 1903) Not confirmed by recent researches.

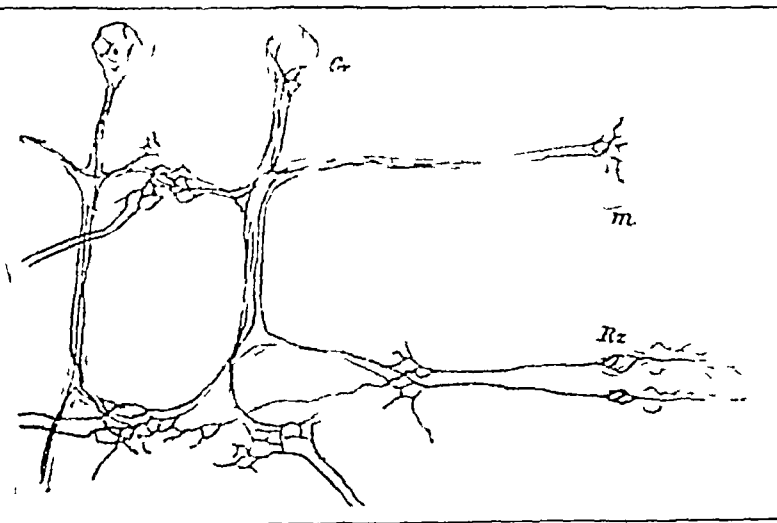


Fig 12—Scheme of the course of the neurofibrils in the nervous system of the crab. (After Bethe, 1903) Not confirmed.

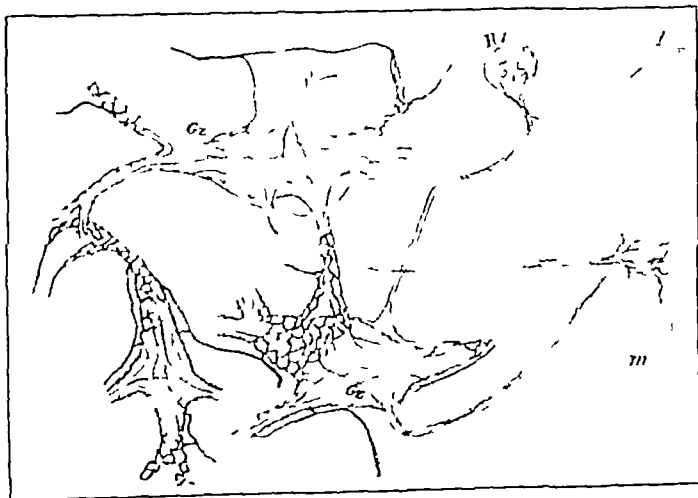


Fig 13—Scheme of the course of the neurofibrils in the nervous system of vertebrates. (After Bethe, 1903) Relation to the Golgi net is shown. Not confirmed by newer work.

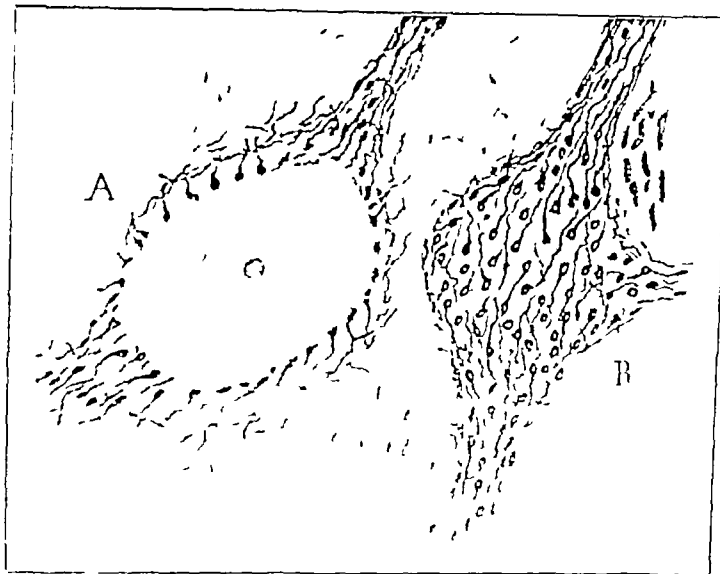


Fig 14—Two large funicular cells of the spinal cord of the adult rabbit. *A*, section through a cell showing terminal buttons of Auerbach ending on the surface of the cell and on the dendrites, *B* terminal buttons shown on the surface of the cell. (After Ramón y Cajal, 1903)

investigative work. Many studied the neurofibrils and extended our knowledge of them, among them Paton, Prentice and Biart in America. In addition, the

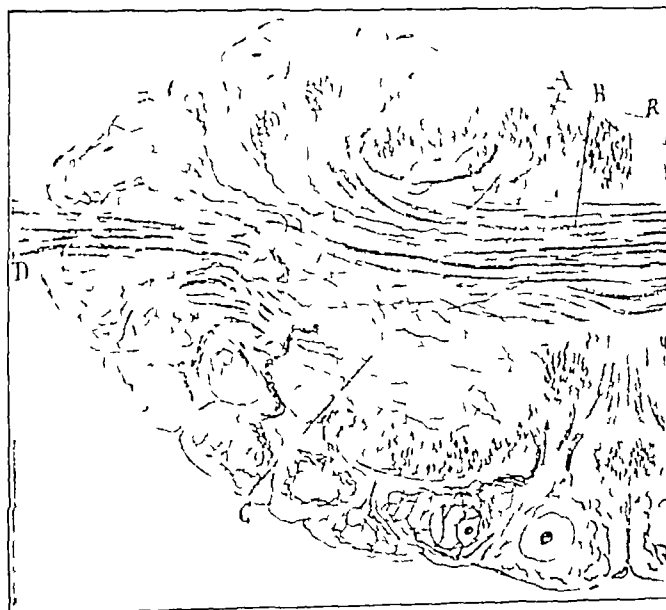


Fig 15—Transverse cut through a ganglion of the leech showing the neurofibril networks in the ganglion cells and the non anastomosing plexus of neurofibrils in the point substance. (After Ramón y Cajal, 1903)

period of polemical writing on the neuron and the neuron doctrines reached its zenith. Edinger, in 1898, had urged the importance of the concept of the neuron

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as a biologic unit, Hoche (1899) had admitted that the histologic unity of the neuron could no longer be upheld, but urged that it was a functional-trophic unit. Munzer (1899) took the stand that the neuron doctrines were better founded than ever, and that the criticisms of Nissl and Bethe were without weight. Auerbach (1899) supported a modified neuron doctrine while Seml Meyer, von Lenhossek, van Gehuchten, and Ramon y Cajal could see no reason for changing the original conception and doctrines. Max Vervorn, in a collective review read before the German Society of Naturalists in 1900 took almost precisely the stand I took in 1899. The two longest publications of the anti-neuronists are those of Bethe (1903) and Nissl (1903). Bethe's book,⁷ while it represents a vigorous attack on the neuron doctrine, embodies the results of most interesting and important original researches, and should be carefully read by every neurologist. Nissl's large volume,⁸ which was reviewed for the *Psychological Bulletin* by Dr Adolf Meyer, is devoted entirely to controversy and is looked on by ardent neuronists as a sort of attenuated curse of St Ernulphus on the neuron doctrine and its supporters.

In December, 1903 by good fortune, I happened to be in Madrid just at the time when Ramon y Cajal⁹ announced his discovery of a new and easy method for demonstrating the neurofibrils. He kindly showed me his preparations, which made clear at a glance that a flood of new light was at once to be thrown on these remarkable constituents of the nerve cells and nerve fibers (Figs 6, 7 and 8). His method is simple, is easily applicable to invertebrate as well as to vertebrate tissues and to the embryonic nervous system as well as to that of the adult. It stains the fibrils much more perfectly than is possible with the methods of Bethe and Apathy, and has the further advantage that it leaves the glia entirely unstained. A somewhat similar, though more complex, method, devised independently and almost simultaneously by Bielschowsky¹⁰ of Berlin, is also now much used for demonstrating the neurofibrils. The finest fibrils are said to be best shown by still a third method, that of the Italian investigator, Donaggio¹¹ (Fig 9).

Let us now turn to an examination of the principal points which have been under discussion of late and see what is the actual state of knowledge concerning them.

(a) *The Neurofibrils, Golgi Nets and Interneuronal Relations*—Studies by the methods of Cajal and Bielschowsky and by the method of Donaggio have shown how rich and delicate the network of neurofibrils in the nerve cells is. Bethe's method stained only the coarser strands, which, therefore, looked like isolated fibrils. The newer methods demonstrate finer fibrils, forming anastomoses among these. Bethe's schemata (Figs 10,

11, 12 and 13) of varying arrangements of neurofibrils as the animal scale is ascended are not confirmed by these newer methods. On the contrary, the nerve cells as regards the neurofibrils are similarly built throughout the whole animal series. There appear to be no independent neurofibrils, but only neurofibril networks embedded in the nerve-cell protoplasm (see figures). The network extends through the whole neuron, but the mass of the network may increase or diminish in size in various parts. Thus there is a large fibril network in the cell body, and this is connected by the attenuated fibril network of the axon, with expansions of the network in the terminal fibers. The so-called "end-feet" of Held are now known to be identical with the terminal buttons of Auerbach, and these, ending on the surface of the cell body and dendrites are exquisitely demonstrated by Cajal's method (Fig 14). I have placed a specimen under the microscope illustrating them. These terminal buttons contain neurofibril networks. Nowhere, in specimens stained by Cajal's method or by Donaggio's method, in the cell body or in the terminal buttons, thus far have the neurofibrils been seen actually at the surface, it is stated that there is always an area of fibril-free protoplasm between the networks and the cell boundary.

These recent methods which stain the neurofibrils so exquisitely do not reveal any extraneuronal neurofibrils whatever, either in the region of Nissl's "nervous gray" (Cajal, Retzius) or in the so-called point substance or neuropile of invertebrates (Cajal, Retzius) (Fig 15). The whole area of Nissl's nervous gray appears in Cajal's specimens as a feltwork of dendrites and terminals and collaterals of axons containing neurofibrils within their protoplasm. The Golgi nets do not stain at all with Cajal's neurofibril method. Moreover, Held, by other methods, has concluded that they are derivatives of the glia, both he and Donaggio deny their nervous character. There is some evidence that the terminal buttons, to which I have referred, reach the protoplasm of the nerve-cell body by lodging in the meshes of the Golgi net. No one has been able to demonstrate any relation between neurofibrils and Golgi nets. In the light of these newer studies the enormous importance attributed by Bethe and Nissl to the Golgi nets seems, therefore, to have been premature, their views are unsupported by facts.

(To be continued)

THE BLOOD-CLOT DRESSING IN MASTOIDECTOMY, CONSIDERED PHYSIOLOGICALLY *

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That the special surgeon can profit largely by keeping in close touch with general surgery is generally admitted, but that all surgeons would gain immeasurably from as intimate an alliance with physiology as they have established with anatomy and pathology is a fact perhaps, not so well recognized. Commenting on this matter, in his last review of surgery, in the December number of *Progressive Medicine*, Dr Bloodgood alludes to the fact that the physiologist, not specially interested in practical surgical questions and not brought into contact with the daily vital problems confronting the oper-

7 Bethe A. Allgemeine Anatomie und Physiologie des Nervensystems. Leipzig 1903 pp 1 to 455.

8 Nissl L. Die Neuronenlehre und ihre Anhänger. Jena 1903 pp 1 to 478.

9 Ramon y Cajal S. Un sencillo método de coloración del retículo protoplasmico e sus efectos en los diversos centros nerviosos de vertebrados e invertebrados. Trab del Lab de Investig Biol., Madrid 1903 vol II No 4 also Translation by Azonlay Bibliogr anat Par and Vauver 1905 vol xiv pp 1 to 93.

10 Bielschowsky M. Die Silberimprägnation der Neurofibrillen. Neurol Centralbl. Leipzig 1903 vol xxii p. 997 to 1006 also Ein neues Imprägnationsverfahren zur Darstellung der Neurofibrillen. Arch f Psychiat., Berlin 1905 vol xxxix, pp 1321 to 1326.

11 For an epitome of Donaggio's method and work see Donaggio H. The endocellular fibrillary reticulum and its relations with the fibrils of the axis-cylinder. Rev Neurol and Psychiat., Edinb., 1905 vol III pp 81 to 100.

* Read before the Southern Section of the O American Laryngological Rhinological and Otolaryngological Society at the annual meeting held in Norfolk Va 1906.

ating surgeon, during his scientific investigations, learns many physiologic facts which would be of great value to the surgeon, yet, with the rarest exceptions, this valuable information is lost, so far as the practical surgeon is concerned. An occasional collection and fitting together of bits of knowledge gained in the course of many physiologic investigations, studies made perhaps without a thought of their bearing on surgery, might enable us to elucidate some of the important problems with which the surgeon has to deal. The possibilities of such a plan occurred to me some months ago while listening to a discussion on the treatment of mastoiditis and, being deeply interested in the blood-clot dressing of the mastoid wound, I determined then to consider from the physiologist's point of view the advisability of employing that method.

It is only a few years since aural surgeons were discussing with great animation the proper method of procedure for the opening of the mastoid process when diseased. To-day we do not debate over the propriety of a simple incision in the overlying soft tissues, a small perforation in the outer cortical layer of the bone or the more extensive invasion of the mastoidal cellular structure, unanimity of opinion has been reached on that point. The history of the development of the operation of mastoidectomy has been furnished us in a most interesting and entertaining way by Dr. Whiting, and we will certainly all agree with him without cavil, however we may differ in the details of performing the operation, in the dictum that the operation of the present period has for its prime object the complete and immediate eradication of all the diseased tissue. In other words, in every operation for mastoiditis the surgeon now endeavors to remove every particle of pus, detritus and necrotic or carious bone, even though he be compelled to obliterate the cellular structure of the tip, the zygomatic process and the occipital region, or to invade the cranial cavity itself. Assuming that all this has been accomplished, however, does it constitute a complete operation?

I think we may accept as applicable to mastoid surgery a statement made by J. Collins Warren,¹ with reference to osteomyelitis, that "Modern surgery demands a complete operation, that is, one which insures rapid and permanent healing of the wound." Permanent healing of the wound will usually follow such an operation as is referred to above, but rapid healing is not so commonly assured. The ideal operation might be described as one which gives the greatest promise of a cure in the shortest possible time and at the least expense of comfort to the patient. If a mastoid wound be dressed with sterile or antiseptic packing at the time of operation the period of healing will vary from three weeks to several months, very rarely will complete closure occur in less than this time, and I have frequently seen cases that required dressing over a period of six months. It can not be denied, either, that these dressings are often distressingly painful to the patient and always time consuming and more or less annoying for the surgeon. If a method of dressing the wound can be devised which will promote rapidity of healing without additional risk to the welfare of the patient, it will certainly add very materially to the comfort and happiness of both patient and operator. Such a method, I believe, has been provided for us in the blood-clot dressing, first recommended for use in the mastoid

operation by Dr. Clarence J. Blake, of Boston, with whose papers on the subject all of you are doubtless familiar.

The primary object of this dressing is to obtain healing of the wound by first intention, but, when this occurs, other advantages accrue, for instance, the normal contour of the mastoid process is restored, the resulting scar is a mere line which is entirely hidden from view by the auricle, and the period of healing is reduced to five or seven days, with practically no after-treatment. No deformity, almost no scar, and primary union constitute, on the whole, a stake worth playing for. On the other hand, in cases in which the blood clot fails to organize, there is no additional risk to the patient, should the wound not have been so clean as was supposed or should the clot become infected in any one of various possible ways, it simply breaks down and the wound has to be opened, cleansed and packed in the usual way, the patient then being in practically the same position he would have occupied had the open method been employed primarily.

With the modern teachings of surgery constantly before us, that all pus cavities should be treated as open wounds and compelled to fill up by granulation from the bottom, it is not surprising that this suggestion of Dr. Blake should have been received with skepticism. As I have talked with my confrères or listened to the discussion of the subject in otologic congresses, it has seemed to me that men hesitated to employ the method, first because of a fear of the possible consequences of inclosing in the wound some microscopic particles of infective material and, second, because they considered the normal blood clot a favorable medium for the growth of bacteria. So far the answer to these expressed or implied criticisms has been solely in the nature of relating clinical experiences. A certain percentage of excellent results have been shown by those who have used the blood-clot dressing and as yet no one has related an unpleasant experience.

It is my purpose to take up these objections from another point of view, namely, to consider what happens when a clean cavity in bone tissue is filled with healthy blood clot, what power such a clot may have to overcome infective material that may have been inadvertently left in the wound, and whether general surgeons have any analogous experiences with other portions of the bony framework, to assist us in drawing conclusions regarding the mastoid portion of the temporal bone.

Experimental and clinical studies have shown that in any clean wound be filled with the patient's own blood and safeguarded from later infection, the blood clot tends to organize and new tissue, similar to that inclosing the clot, soon forms to replace the latter. The blood flowing into the wound cavity rapidly clots and the fibrous framework of this clot constitutes a scaffolding on which the new tissue is built. Fresh granulations spring from the walls of the cavity and grow out into the clot forming a new fibrous connective tissue, the nature of which is further altered to accord with the character of the surrounding cavity walls, that is, if the wound be made in bone, osteoblasts are sent out from the bony walls or from the periosteum to convert the fibrous substance into osseous tissue. The migratory power of these osteoblasts is limited and they travel only a short way from their starting point, so that, in the case of a large cavity in bone, the newly-formed bone does not extend far from the cavity wall, and the

¹ "Surgical Pathology" (Am. J. Surg.), Warren, 1895, p. 214.
Is shown Not confirmed.

center of the new-formed tissue remains fibrous in character. It seems quite probable, however, that in a small cavity, such as we ordinarily make in the mastoid process, the osteoblasts, reaching out from all directions, may extend a sufficient distance to meet in the center and thus to complete the construction of a new bony process. Just how early this osteoblastic activity commences is not known, but such cells have been observed to form within forty-eight hours after the operation, and it is certain that granulation tissue grows more rapidly into a healthy blood clot than into space. It is plain, then, that Nature may be greatly aided in the reconstruction of destroyed tissue by providing an excellent framework on which to build and leaving her only the task of furnishing vascularity and new tissue cells.

But, suppose the wound cavity to be treated is not absolutely clean that some invisible particle of septic material is present when the blood is introduced, has the blood any bactericidal or antitoxic powers? A long series of observations by the most careful investigators has clearly proved that the normal human blood does possess such properties. Metschnikoff, Nuttall, Fodor, Lubarsch, Vaughan and Novy and a host of others have published most interesting work on this subject. From their several experiences we may safely draw the following conclusions: The normal human blood possesses bactericidal power, varying in degree in its antagonism to different micro-organisms, this property of the blood is greater after it is drawn from the vessels than while circulating intravascularly, the microbe-destroying substance is found in the serum, but is produced by the leucocytes, certain chemical changes in the blood may be induced either to increase or to diminish its bactericidal power and this property of the blood naturally diminishes after the clot is forty-eight hours old.

Nuttall, following a suggestion of Metschnikoff, was probably the first to demonstrate the bactericidal power of normal blood serum. Working under the direction of Flugge in 1888, he used defibrinated blood taken from various species of animals and found that this blood destroyed the *Bacillus anthracis*, *Bacillus subtilis* and the *Staphylococcus pyogenes aureus* when brought into contact with them. He also confirmed the finding of Fodor that after awhile the blood loses its germicidal properties and becomes a suitable culture medium in which germs grow abundantly.

The fact having thus been determined that the blood serum removed from the body acts far more rapidly and energetically on microbes than the plasma and lymph within the body, the disparity of action was further shown by Lubarsch,² who attempted to ascertain the exact power of the blood of some animal over a given serum, using the bacillus of anthrax and experimenting on rabbits. He injected known quantities into the circulating blood and found that this animal was quite able to take care of a dose of less than 16,000 germs, but if a larger number were injected fatal infection resulted. If he drew a small quantity of blood from an animal of the same class and size into a test tube and inoculated that with the same micro-organism, many times that number of germs were destroyed; that is, one cubic centimeter only of the rabbit's blood serum would destroy more than 16,000 of these germs when inoculated into the clot outside the body and he could not after a few minutes reproduce them by culture from the clot.

Then a most interesting series of investigations followed to determine what element of the blood possessed this bactericidal quality and how it acted. Vaughan and McClintock have presented the most conclusive report on these points, and they hold that the leucocytes secrete some substance which is poured into the serum, that this substance is a proteid, and that the only proteid likely to be present in blood serum to which such properties could be attributed is nuclein.

The clotted blood possesses greater power than the circulating blood probably because in the formation of the clot the leucocytes break down and discharge their entire complement of this nuclein. Other workers have demonstrated the transient duration of this power in the blood clot, a power which seems to diminish rapidly after forty-eight hours, and the fact that certain chemical changes in the clot may cause a variation of its power. The bactericidal power seems to be present in freshly drawn blood only when it is alkaline in reaction. If its alkalinity be raised above normal the bactericidal power will be somewhat enhanced, but if the blood be below normal alkalinity or if it be rendered acid in reaction such power is diminished or actually destroyed. The nuclein acts only in an alkaline serum. Again, if alcohol be added to the blood, the bactericidal property is destroyed through the precipitation of the albuminoid constituent. Bichlorid of mercury, likewise, has a deleterious influence on the bactericidal property of blood serum.

These chemical experiments have an important bearing on the use of blood clot as a surgical dressing.

The use of carbolic acid and alcohol for the cleansing of the wound, as an extra precaution of cleanliness, prior to the introduction of the blood, has been recommended by some surgeons, but it seems not unreasonable to venture the suggestion that some of the failures with the blood-clot dressing may have been due to excessive zeal in the use of carbolic acid and alcohol for antiseptic purposes. If exact neutralization were possible and the wound left in a neutral state, no harm could result from the employment of these substances, but if there be left any measurable quantity of either it militates against success. On theoretical grounds it would appear more rational to rely on dry cleansing of the wound with instruments and sterile sponges, or to wash the cavity with sterile salt solution which if it produces any effect on the coming clot, renders it more alkaline and increases its power to control septic material.

Leaving the realm of experimental medicine and turning to practical surgery, we find, again, the strongest possible indorsement for the employment of healthy blood clot in the healing of wounds. Most physicians are familiar with the epoch-making report of Schede, "Ueber die Heilung von Wunden unter dem feuchten Blutscharf," or know of the most excellent results obtained by Halsted and his associates in the treatment of osteomyelitis by this method. The whole subject was excellently presented by Professor Halsted several years ago and, as there is no higher authority, I could do no better than quote from his paper.³

After reviewing the objections to leaving blood in wounds and the bearing of Lister's work on the subject, he says

"Although perfectly familiar with the organization of the

² Allbutt's System of Medicine vol 1 p 59

³ Johns Hopkins Hosp Reports vol 11 255-261

blood clot it apparently never occurred to Lister to make a systematic effort to utilize the blood clot and to imitate Nature's method of disposing of the dead spaces in wounds.

He has taught us what can be done under the cover of antiseptics. One may maltreat the tissues to any extent, mutilate the wound during the operation in every possible way, cut off by ligatures the circulation in large masses of tissue, produce extensive areas of superficial necrosis by irrigation with antiseptic solutions, stuff the wound with gauze and drainage tubes, tear out the stuffing and with it the granulations which have grown into it, restuff etc., and still the wound may heal without suppuration without septic inflammation and in a way which is perhaps altogether satisfactory to the surgeon.

But now that wound infection is for many surgeons almost a thing of the past we may ask ourselves if, after all, our wounds are ideal wounds. One naturally hesitates to attempt to give one's notion of an ideal wound. His ideal wound of to-day may not be his ideal wound of next year or even of to-morrow. I conceive an ideal wound to be one which immediately after the operation is reduced to the condition of a non-penetrating subcutaneous wound, and which is as free as this is from the dangers of infection.

Impressed by the work of Kuster, Neuber and others, and entertaining with them the same fears of blood in wounds, it was my practice for several years to attempt with the utmost care to obliterate the dead spaces in wounds. The results were gratifying, but the technique was often very tedious. For example after an amputation of the thigh it would not infrequently take an hour to obliterate all the dead space. The mechanical problems were sometimes quite difficult and one was perpetually annoyed by the fear that he might strangulate the tissues included in the sutures. After a time I became convinced that it was impossible to obliterate thoroughly all the dead spaces in some wounds and I observed that wounds in which the dead spaces were not obliterated healed through out by first intention just as regularly as did the other wounds. I was, therefore, quite prepared to welcome Schede's article on the healing of wounds under the moist blood scab. This contribution by Schede I believe to be the greatest which has been made to the technique of surgery since the introduction of antiseptic methods by Lister.

The immortal John Hunter was many years in advance of his time when he expressed himself on scabbing and the organization of the blood clot as follows: "In many deep seated wounds where all the parts have remained in contact those underneath will unite much better if the surface be allowed to scab. Some compound fractures (more especially where the external wound is very small) should be allowed to heal in the same way, for by permitting the blood to scab on the wound, either by itself or when soaked in lint, the parts underneath will unite, the blood under the scab will become vascular and the union will be complete even when the parts are not in contact. Many wounds ought to be allowed to scab in which this process is now prevented, and this arises, I believe, from the conceit of surgeons who think themselves possessed of powers superior to Nature, and, therefore, have introduced the practice of making sores of all wounds."

From these and similar experiments and experiences, I think we are fully justified in using the blood-clot dressing to complete the operation of mastoidectomy, and I only wish to add a few words regarding the technique of its employment. You will infer from what I have said that very little can be done to assist the blood clot in its possible conflict with overlooked septic material, but a good service can be rendered by avoiding some things that would tend to hinder the blood in its beneficent work.

In the first place, the nearest possible approach to absolute surgical cleanliness must obtain throughout the operation. This applies not only to the operator and

his assistants, to the sterilization of all instruments and the protection of the operation field by proper sterile sheets or towels, but also the perfect removal, so far as can be determined, of every particle of infective material and of diseased tissue.

Next, it is exceedingly important that the wound be closed in such a way as to prevent the introduction of new infection and to promote primary union. It is my opinion that a good many failures with the blood-clot dressing have been the result of faulty closure of the soft parts. Shreds of tissue that may be infected or that would prevent neat apposition of the margins should be cut off. Chemical sterilization of the wound should not be attempted. If irrigation is considered necessary, sterile normal salt solution may be employed. Finally, for the closing of the wound, the subcutaneous silver wire suture recommended by Halsted may be used.

All physicians are familiar with the experimental work performed some years ago by Professor Welch on the sterilization of the skin. Making use of the most approved methods of cleansing the skin's surface, he could still secure a bacterial growth from the deeper layers of the corium and he determined that this region was the natural habitat of the *Staphylococcus epidermidis albus*, which germ was the active factor in the production of the common stitch abscess. If the sutures be carried through the skin from side to side of the wound, it not only makes the opportunity for a stitch abscess but opens up a new avenue for infection of the clot. In many instances this will not be sufficient to cause a breaking down of the clot, but if that blood is having a battle with septic particles within the cavity this may be the last straw needed to cause a breakdown.

Furthermore, in the subcutaneous method of suturing wounds, silver wire is the best material to use because it possesses antiseptic properties of its own. Some years ago Bolton, working in Kelly's laboratory, undertook to ascertain the relative value of suture materials and he found that the best of all was copper wire and next to this came silver, inasmuch as the latter is, for commercial reasons, most available and the antiseptic properties but slightly different, he recommended the general use of silver. It can be easily and surely sterilized by boiling, while catgut is, under the best of circumstance unreliable and silk is only less so. With a subcutaneous silver wire thread, lacing the wound from side to side and not penetrating the skin at any point, one has a suture easy of introduction, perfectly sterilizable, strong enough to bear any traction necessary to secure good apposition of the wound lips, and removable without pain at the proper time. A layer of silver foil over the closed wound, before the sterile gauze dressings are applied will add something to the protection against septic invasion.

It may be too much to say that the complete operation referred to here and described so well to-day by Dr. McKernon and Bryant, with the blood-clot dressing will constitute the ideal, but I believe it will come to be accepted as the standard operation of mastoidectomy.

4 M Schede "Ueber die Heilung von Wunden unter den feuchten Blutschorf" Verhandlungen der dents. Gesellschaft für Chirurgie 1886

Stokes-Adams Disease in Incipient Paresis—M E REIK (Bull et Mem de la Societe Med des Hopitaux) reports a case of Stokes Adams disease complicating the early stages of paretic dementia of syphilitic antecedents. The relation between the bradycardia and the meningo-encephalitis seemed evident, but he remarks that, while lues is known as a cause of either condition, the combination here seems novel.

SOME OBSERVATIONS ON CEREBRAL PARALYSIS*

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These observations will be limited to the cases of paralysis that are the result of cerebral embolism, hemorrhage or thrombosis.

These three pathologic conditions constitute the vast majority of the cases. The records of Cook County Hospital for 1903 show four cases of embolism, sixty-five cases of hemorrhage and twenty cases of thrombosis. In thirty-two cases of cerebral paralysis the pathogenesis was in doubt. The records of the year 1904 show six cases of embolism, sixty-nine cases of hemorrhage, thirty-one cases of thrombosis and thirty-four cases in which the pathogenesis was doubtful.

Differentiation was made either in the postmortem room or by a medical staff very skilled in diagnosis, and they differ somewhat from the ordinary published records of such cases. They show an immense preponderance of hemorrhage, and this should be remembered at the bedside when an effort is being made to work out a diagnosis in any given case.

The records of the health office of Chicago give the following interesting results:

DEATHS—Total from apoplexy first period, 1885-1904	4 653
Second period, 1895-1904	6 036
Actual increase second period	1 383
POPULATION—Average yearly first period	987 644
Second period	1 656 600
DEATH RATES—Apoplexy per 10 000 of population first period	47
Second period	36
Per cent. decrease, second period	23.4
RATIO—Apoplexy deaths to total from all causes first period	2.3
Second period	2.4
Per cent. increase second period	4.4

The percentage of decrease in the second period as set forth by the table is interesting. The death rate of Chicago has been decreasing for several years, until today it shows a record that is very remarkable, being the lowest of any large city in the world. This decrease in cerebral apoplexy, which corresponds with a decrease in nervous diseases generally during the second period, is an encouraging outlook and would seem to show that the people of that strenuous city are adjusting themselves physically to the conditions there.

ETIOLOGY

Cerebral paralysis in the cases to which these observations are limited is the result of periarteritis or endarteritis, producing hemorrhage or thrombosis, and endocarditis resulting in embolism.

The periarteritis or endarteritis in the case of hemorrhage weakens the muscular coat of the vessel and produces aneurisms, usually solitary, and the process continues until the walls become so feeble that rupture occurs. In the case of thrombosis the intima becomes roughened and gradually fibrinous deposits take place, little by little obliterating the lumen until finally occlusion occurs. In the first case the blood vessel carries the blood current with sufficient success to meet the ordinary demands of the brain for nutrition until the moment that rupture occurs. Hence there is in hemorrhage usually an absence of prodromal symptoms. In the second case the process of obliteration is slowly carried on and the nutrition of the brain is more or less interfered with from the beginning, therefore, prodromal symptoms are the rule such as headache, vertigo,

transitory paresis and aphasia and a sense of general discomfort in cerebral function.

In the case of endocarditis there is as a sequence the formation of polypoid vegetations on the valves of the heart, and later these vegetations become detached and are carried by the blood current until they reach a point beyond which they can not pass and occlusion occurs. For anatomic reasons with which you are perfectly familiar, the usual route traveled by an embolus is the left common carotid artery, the left internal carotid, the left middle cerebral, and the occlusion occurs in one of the branches of this artery that supplies the basal ganglia and the internal capsule. There is under these circumstances no interference with the brain nutrition until the very moment occlusion occurs, and, therefore, there are usually no prodromal symptoms, except such as are of a general character that may arise from an uncompensated heart.

The cerebral circulation is remarkable in the comparative absence of anastomosing branches, in the terminal character of the vessels, and in the fact that they lie in the perivascular spaces without the usual protection that contiguous tissue gives in other parts of the body, and the seriousness of any one of these pathologic processes is greatly increased by the interference that it produces in the brain with the lymph circulation. The vessels that supply the basal ganglia and the internal capsule, arising directly from the middle cerebral arteries, are comparatively large and have generally a high blood pressure, and the pathologic process that occurs here is not only more extensive, but more frequent.

In these several pathologic conditions we must not only consider the direct damage done to the brain by the destruction of neuraxons that lie in the focus of the lesions, but around about this focus there is always an area more or less extensive of collateral edema and exudation that for a time effectually destroys the functions of the territory.

The apoplectic coma must be differentiated from the syncope of alcoholic intoxication, from the coma of epilepsy, uremia, diabetes and from drug poisoning. In some cases this is extremely difficult. An eminent medical practitioner of Chicago some few years ago left his home to visit a case some distance away. He was quite fatigued on leaving his home and took a drink of whisky. Before he reached the house of his patient he fell on the sidewalk, a policeman, passing by, recognized him, smelt the alcohol on his breath, jumped to the conclusion that the doctor was intoxicated, carried him to a near-by drug store, and placed him in a rear room until he would recover from the alcoholic intoxication, as he supposed. A doctor, who officed over the drug store, was called in to see him, and he accepted the diagnosis of the policeman. When morning came the good doctor's coma if anything, had deepened, and then consultation was called and his family notified. At the time of consultation there was but little difficulty in the differentiation. The muscular tonus of the two sides was different, there was conjugate deviation of the face and of the eyes. Skin reflexes were lost on the paralyzed side. There was a well-defined Babinski toe sign. Arterial tension high. Rectal temperature lowered. Temperature on the paralyzed side increased. Perspiration marked on the paralyzed side. These several symptoms and the absence in the history of prodromes rendered the diagnosis of cerebral hemorrhage possible, which was subsequently verified by postmortem. Mistakes

* Read before the Sioux Valley Medical Association.

such as were made in this case are not at all infrequent in large cities and warn us that we should always be on our guard and not be led astray by alcoholic odor on the breath. I regard the conjugate deviation of the face and eyes and the Babinski toe sign when present (unfortunately they are not always present) as invaluable pathognomonic signs.

In thrombosis we should expect a series of prodromal symptoms covering a space of several months, a low arterial tension, a slight degree of coma, unchanged temperature, and a pale face. In a recent case of cerebral paralysis, however, prodromal symptoms that were present for a few days before the apoplectic seizure and the normal arterial tension resulted in a diagnosis of cerebral thrombosis, when the postmortem findings gave cerebral hemorrhage.

I am very much of the opinion that we should be extremely guarded in reaching positive conclusions as to whether a given case is one of hemorrhage, thrombosis or embolism. In embolism we do not expect arteritis, we do not expect prodromata, and we do find valvular heart disease, but we must bear in mind that a valvular heart disease is not inconsistent with the possibilities of either thrombosis or hemorrhage.

The prognosis in cerebral paralysis is grave in proportion to the depth and duration of the coma. Cheyne-Stokes respiration will always make the prognosis serious, and convulsions add greatly to the gravity. Acute bed-sores are also serious indications. Sudden elevation of temperature will make prognosis doubtful, and an attack no matter how slight, implies probability of a recurrence. In favorable cases improvement will be manifest at the end of a week. Early contractures are not serious in their import, but contractures that occur about a month after the seizure are an evidence of a descending degeneration in the motor tract, and this usually means that no further improvement can be expected.

TREATMENT

The preventive treatment of cerebral hemorrhage or thrombosis is the treatment of the arterial degeneration on which they both depend. The etiology of this is sometimes clear enough, and when it can be determined the treatment will suggest itself. I think the specific relations to arterial degeneration are sometimes overlooked. I am of the opinion that degenerations of arteries that are found in younger people, in the absence of interstitial nephritis, of very pronounced chronic alcoholism and tuberculosis, are specific and demand the use of mixed treatment to the maximum capacity of the individual. Those cases that do not have a specific history are much benefited by a course of chlorid of gold and sodium. This drug should be rubbed up dry with the pulverized resin of guaiac, put dry in a capsule, and administered before meals. Along with this there must be a proper attention to elimination by the skin, kidneys and bowels and due attention to the digestive function.

The treatment of the apoplexy depends on the diagnosis of the lesion. If you are sure that it is hemorrhage, reduce arterial tension, administer croton oil, thereby bleed the patient into his own abdominal vessels. Apply ice to the head, hot mustard plaster to the feet. If possible, tincture of aconite, frequently repeated, in full doses. Have the head of the bed raised. If you are sure the lesion is thrombosis, the treatment should be diametrically opposite. Increase arterial tension by strychnia and other cardiac tonics, avoid active

purgation. In the great majority of cases the safe treatment will be characterized by a masterful inactivity. Quiet, warmth, cleanliness, position in bed to secure the best respiratory activity, due attention to the bladder and bowels are safe indications in every case.

With the disappearance of the apoplexy, attention should be given to the paralyzed muscles. Gentle massage and passive movements that will preserve the nutrition of the muscles are indicated from the beginning. The muscles in cerebral paralysis atrophy with rapidity sometimes, especially is this the case with the deltoid, and if the muscles are not maintained in a proper state of nutrition when the collateral edema already mentioned disappears function can not be re-established. In my experience, this very important consideration is often overlooked. After about ten days mild faradic exercise of the muscles should be commenced and used every day. The séances should be short, remembering that it is easy to produce exhaustion in the muscles, thereby defeating the object of the treatment. Two or at most three contractions of each muscle or group of muscles at each seance is enough, and the least current that will produce this result should be used.

There is a difference of opinion as to the value of cerebral galvanization in these cases. For my own part, I am confident that a mild constant current of from two to five milliamperes, positive electrode to the head and negative to the nucha, for about five minutes daily favors the disappearance of the edema and exudations and the retrograde changes that must take place in the pathologic focus. I, therefore, advise cerebral galvanization.

As soon as there is any appearance of returning voluntary power the patient should be encouraged to exercise it freely, and many failures in treatment result from a want of persistent effort in this direction. The moderate use of the iodids and of the easily assimilable preparations of phosphorus assist in bringing about the necessary nutritional changes in the brain and in maintaining the general health of the patient while the process of repair is going on.

Aphasia, a common symptom in right hemiplegias in right-handed persons, can often be greatly benefited by education. A few years ago a young man received a gunshot of the head, resulting in right hemiplegia and aphasia. Little by little the hemiplegia disappeared, the aphasia remained. His sister, under my instruction, began the work of re-educating him. I presumed the speech center on the left side of the brain was destroyed, and I think the excellent work she did after twelve months resulted in his being able to talk with very great facility was a consequence of an education of the center on the other side—the center of left-handed persons. But be it as it may, the result was a restoration of his speech capacity, and what was done in his case can be done in other cases by an earnest and persistent effort. I have almost succeeded recently in accomplishing the same result in a much older person after several months' earnest work by a wife and daughter. In this case there was a reacquisition not only of the speech capacity, but of the writing capacity, and when the person writes slowly he writes well, when he talks slowly and deliberately he articulates well.

I think we are very much disposed to neglect this educational feature in the treatment of cerebral paralysis.

DOUBLING OF THE CARDIAC RHYTHM AND ITS RELATION TO PAROXYSMAL TACHYCARDIA

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Paroxysmal tachycardia derives its name from the characteristic paroxysms of extremely rapid heart action that occur from time to time. These usually begin abruptly, last for minutes, days or weeks, and finally end almost as abruptly as they began. During the paroxysm the pulse rate ordinarily ranges between 180 and 300 a minute. At times the patient is hardly conscious of his condition. More frequently, however, he suffers from various cardiac symptoms, such as palpitation, dyspnea and painful or oppressive sensations in the precordium. In severe cases, well-marked signs of cardiac insufficiency, such as venous stasis and edema, may be present.

No adequate physiologic explanation of this form of tachycardia has been given. In many of its features it suggests a neurosis, yet attempts to produce a similar acceleration experimentally, either by stimulation of the accelerator or by division of the inhibitory nerves to the heart, have failed. Recent observations have thrown quite a new light on the nature of paroxysmal tachycardia and these new facts must hereafter find a place in any attempt at an explanation of this most remarkable affection. It has been demonstrated that, in a number of patients at least, there is an abrupt doubling of the heart rate at the beginning of the paroxysm of tachycardia, and that the return to the original rate is sometimes as abrupt as the onset.¹

Considerable interest, therefore, is attached to the phenomenon of a doubling of the cardiac rhythm. The following case is reported partly because it adds another to an already interesting series of cases and partly because it serves to prove that a doubling of the pulse rate may occur, even though none of the clinical features of paroxysmal tachycardia are present. For permission to report this case I am indebted to Dr J O Hirschfelder, in whose wards these observations were made.

Patient—T C, a longshoreman, aged 50, was admitted to the City and County Hospital of San Francisco, Sept. 27, 1905, his complaint being shortness of breath.

History—His family history was negative. He had been a very healthy man up to the present illness, he denied venereal infection. He drinks regularly five or six whiskies and five or more glasses of beer daily. He chews and smokes to excess and is accustomed to very heavy labor.

Present Illness—The patient felt well till seven months ago, at which time he first noticed some shortness of breath on exertion. This dyspnea gradually grew worse until finally it became continuous and so bad that he was compelled to assume the sitting posture at night in order to sleep. He has had some edema of the feet and legs. About one month ago his left pleural cavity was tapped and a large quantity of fluid withdrawn. He has an occasional cough, with slight yellowish expectoration. At times he has pains in the left side of his chest, made worse by coughing. For the past three weeks he has been passing unusually large quantities of urine, and his edema has practically disappeared. Occasionally he has slight headaches there are no other serious symptoms.

Examination—The patient is a well-developed but somewhat

emaciated laboring man. Conjunctivæ are pale. Lips and fingernails are pale and cyanotic. Pupils are normal. There is a slight arcus senilis. Tongue and throat are negative. The chest is somewhat barrel shaped. The lower right side moves somewhat better than the left. In the right inter scapular region there is slight dullness, with increased fremitus and harsh expiration, but it is doubtful if these represent any more than the normal difference between the two sides. No râles could be heard.

Heart—A diffuse pulsation is visible over the precordium, with the point of maximum impulse in the fourth intercostal space 8 cm from the median line. There is a heaving impulse on palpation. The area of cardiac dullness begins above at the middle of the third rib and extends 8 cm to the left of the median line and 3 cm to the right. At the point of maximum impulse the first sound is well heard and clear, the second sound is faint and it is accompanied and followed by a faint blowing murmur. This diastolic murmur is heard over the whole of the precordium, being loudest in the third and fourth intercostal spaces near the sternum and very faint over the aortic area. During his stay in the hospital this murmur disappeared. Both second sounds are faint. The radial arteries are much thickened and slightly nodular. There was no collapsing character to the pulse even at a time when the diastolic murmur was well heard. There was no visible venous pulsation in the neck.

Abdomen—The hepatic flatness begins at the upper border of the sixth rib and extends to the costal margin, the total vertical flatness being 10.5 cm in the mammary line. The edge of liver could not be felt. Splenic dullness was not enlarged and the spleen could not be felt. The kidneys were not palpable. Pulsation of the abdominal aorta could easily be felt. Reflexes were normal.

Urine—Specific gravity, 1.010, clear, neutral, amber, no albumin, no sugar, microscopically, a few hyalin and finely granular casts were seen.

The history of the patient was that of a man who had suffered from a gradually progressing and rather serious cardiac breakdown, with urgent dyspnea, general anasarca, and a left hydrothorax. At the time of admission he had partially recovered from this breakdown, and during his stay in the hospital he continued to improve until at the end of two months he was able to leave and to do light work. It is difficult to define the exact nature of his cardiac lesion. The faint diastolic murmur heard at the first examination was probably of but little importance, for had it denoted an aortic lesion of any severity the pulse would probably have shown a collapsing quality and the murmur would not have disappeared during his stay in the hospital. This murmur is probably to be classed among the functional diastolic murmurs, the most frequent of which are transmitted venous murmurs.² We have no reason to suspect a neurosis in this patient, for with a high grade of cardiac insufficiency he presented absolutely no neurotic stigmata and no abnormal cardiac sensations. By exclusion therefore we are led to diagnose a lesion of the heart muscle, which diagnosis is strengthened by the history of such etiologic factors as hard work, the abuse of alcohol and tobacco, and marked peripheral arteriosclerosis. No history of typical attacks of paroxysmal tachycardia could be obtained. The history was rather that of a gradually progressing cardiac breakdown followed by an equally gradual recovery. At no time did the pulse rate rise above 145 a minute.

During the examination of September 29 it was noticed that the heart rate as observed at the apex changed abruptly, according to the position of the patient, without his being in any way conscious of such a change.

1 A Hoffman "Neuere Beobachtungen über Herzjagen" Deut. Arch. f. Klin. Med., vol. lxxviii, p. 39. Ueber Verdoppelung der Herzfrequenz nebst Bemerkungen zur Analyse der unregelmässigen Pulse." Zeits. f. Klin. Med., vol. lxxx p. 206. Lommel "Ueber anfallweise auftretende Verdoppelung der Herzfrequenz," Deut. Arch. f. Klin. Med. vol. lxxxii, p. 495.

2 Cabot and Locke Johns Hopkins Hospital Bulletin Mar 1903.

While lying flat on his back the rate varied between 68 and 72 a minute whereas when he sat up in bed it varied between 134 and 142. The ratio between the two was, therefore, approximately 1:2. Usually the pulse rate as felt at the wrist corresponded to the apex rate. Yet this was not always the case. At times, when the patient was sitting up, only half as many pulsations were palpable at the wrist as at the apex, for the reason that every other contraction of the heart failed to produce a palpable radial pulse. At such times palpation of the apex as well as tracings taken from this region revealed no difference either in time or character between the apex beats giving rise to radial pulsations and those failing to do so. By auscultation over the heart, however, it could be demonstrated that the second sounds were barely audible after those beats that produced no palpable radial pulses.

Having found that the heart rhythm altered with change of position, it remained to demonstrate this alteration by graphical methods. Unfortunately, a complete set of tracings were not made on this day, and although the patient was under constant observation for two months subsequently, the same condition did not recur. Usually his pulse was absolutely regular, its rate varying between 60 and 90 a minute. At times, however, it became very irregular partly owing to the occurrence of extra systoles and partly owing apparently to an irregular rate of stimulation. Two good tracings illustrating the change from the fast to the slow rhythm were obtained, both of them being practically identical. Figure 1 shows on the left the rapid rate, the average duration of beats being 2.26 fifths of a second (average taken of 26 beats). It shows on the right the slow rate with an average duration 4.46 fifths of a second per beat (average of 11 beats). The ratio between the two is almost precisely 1:2, in other words, the heart is beating twice as fast in the one as in the other. On the second tracing not reproduced, the average duration of the short beats is 2.1 fifths of a second and of the long beats 4.1 fifths of a second. Here again, the ratio is almost precisely 1:2. The normal pulse rate of this patient in bed, as shown by subsequent observations over a period of two months, lay between 60 and 90 a minute, i. e. the average duration of the pulse was 4.2 fifths of a second. We may assume, therefore, that the slower of the above rates represents the normal rate, and that the more rapid rate is caused by a doubling of the heart rhythm.

What physiologic explanation can be given for such a doubling of the pulse rate? According to Englemann, the activity of the heart may be affected in the following four ways: (1) The rate of stimulation may change, (2) the irritability of the heart muscle, its responsiveness to stimuli, may be altered, (3) the conduction of the stimuli from the mouths of the great veins to the apex of the heart may be affected, and (4) the contractile power of the muscle itself may be altered. How can a doubling of the cardiac rhythm be explained in accordance with this hypothesis of Englemann? At first thought one would be inclined to attribute the change in heart rate to an alteration in the rate of stimulation. A more exact analysis of these curves, as well as of those of other authors, fails, however, to support this supposition. In that case, we should expect no such sudden alteration of the pulse rate as is here present but rather a gradually increasing rate, e. g., from 70 to 80, 90, etc., up to 140 and *vice versa*. A gradual

transition of this character is observed after section of the vagi or after stimulation of the accelerator nerves. It occurs during exercise, excitement, etc. In all of these cases the more rapid heart rhythm is due to an increased rate of stimulation. In the class of cases under consideration no such gradual transition takes place. There is a sudden jump from the slow to the fast rhythm and the return from the fast to the slow is often equally abrupt, as it was in the present case. The only satisfactory explanation hitherto advanced for such an abrupt jump is that put forward by Hoffmann.¹ He assumes that in these patients and possibly in normal persons as well, the heart is stimulated much more frequently than a study of its rate would seem to indicate, but that it does not contract with every stimulus. In the above patient, for example, we may assume that the heart constantly receives 140 stimuli each minute, but that in the recumbent position it responds only to every other stimulus and that consequently it beats at the rate of 70 a minute. When the patient sits up, the heart then responds to every stimulus and its rhythm changes abruptly from 70 to 140 a minute.

This failure of the heart to respond to every stimulus may be accounted for in three ways according to the Englemann hypothesis: (1) The irritability of the heart muscle, always lessened after a contraction, may not recover after one stimulus in time to respond to the next. The heart would then contract only with every other stimulus. (2) The contractile power of the heart muscle may be similarly slow in recovering with a similar halving of the heart rate. (3) Each stimulus may cause a contraction of the fibers about the mouths of the great veins, but this contraction may not be conducted to the remainder of the heart. In other words there is a "blocking" of every other contraction wave high up in the auricle. It is difficult to decide in which of these ways the heart fails to respond to every stimulus.

The last or "block" theory derives considerable support from the fact that we may get a second doubling of the heart rhythm. Hoffmann, for example, has observed a pulse rate changing from 60 to 120 a minute and afterward from 120 to 240. If we assume that this heart normally receives 240 stimuli a minute and that its responsiveness to these stimuli gradually lessens then we should expect that at first it would respond only to every other stimulus and that its rate would become 120 a minute. If, then, its irritability or its contractility were still further diminished, we should expect that it would respond to every third stimulus and that its rate consequently would become 80 a minute. Such a reduction may, indeed, occur, as happened in my own case (Fig. 2), but it appears to be rather exceptional and never of long duration. As a matter of fact, the rhythm drops from 120 to 60, instead of from 120 to 80. It is difficult, therefore, to explain a fourfolding of the rhythm on the theory that the heart muscle is lacking either in irritability or contractility.

The hypothesis of a "blocked" impulse will, however, explain this fourfolding of the rhythm in a very satisfactory manner. We need only assume that the impulse is blocked at two separate points, the one being situated below the other. At the first point every other beat is blocked and the rate is reduced from 240 to 120, at the second point every other beat that remains is again blocked and the rate is then reduced from 120 to 60 per

minute Kries³ has shown experimentally that a blocking of the cardiac wave of contraction between the auricle and the ventricle of a frog's heart, produced by artificial cooling, follows this same rule, the ratio between the auricular and the ventricular rhythms becoming 2 1, 4 1, 8 1, whereas the intermediate ratios such as 3 1, 5 1 are not obtained. Erlanger,⁴ on the other hand, has shown for the mammalian heart that the 3 1 ratio may be produced experimentally, thereby proving that the 3 1 ratio is not inconsistent with a blocking. In view of these facts, therefore, it would seem that our best explanation of a doubling with subsequent four-folding of the cardiac rhythm is that the heart is receiving a great number of stimuli, but that these are blocked at two successive points, one below the other.

In Figure 1 the rapid beats before the transition show a distinct tendency to vary regularly in size, smaller beats (b, d, f, h, j, l) alternating with larger ones

appear. In another tracing, showing a transition from the fast to the slow rhythm, an alternation in the size of the beats can also be made out just prior to the transition, but in this instance the smaller beats ultimately disappear. In neither case is there a gradual dying out of the smaller beats, as has been figured by Hoffmann and by Lommel. An alternation of small with large beats may even persist throughout the tachycardial attack, and I am inclined to offer this as an explanation of the fact that at times my patient's pulse seemed to be beating only half as fast as his heart. It is quite possible that the alternating small beat was not palpable at the wrist. Unfortunately, no tracings were taken at such a time.

Figure 2, a pulse tracing taken during the slow rhythm, shows one unusually long beat "z" interposed in what would otherwise be an absolutely regular rhythm. The length of this beat, 6.5 fifths of a second, is almost

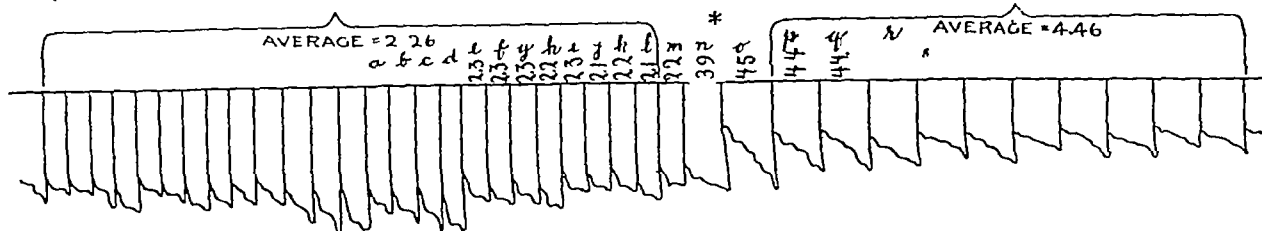


Fig 1—A radial tracing showing the transition from the slow to the fast rhythm. At * the interne who was listening to the heart exclaimed that its rhythm had changed. Time is marked in fifths of a second.

(a, c, e, g, i, k, m). This phenomenon has been demonstrated far more conclusively by Hoffmann and by Lommel. They observed a diminution in the size of alternate beats which progressed gradually until finally the smaller pulsations disappeared and a half rhythm was established. The transition from the slow to the fast rhythm may take an opposite course, i. e., small beats appear between the larger ones and gradually increase in size until all become equal and the rhythm is doubled. Such observations favor the second of the above explanations of the doubled rhythm, namely that the contractile power of the heart muscle is at fault

exactly one and a half times as long as the beats that precede and follow it (4.4 fifths of a second). Precisely similar lengthened beats, five in all, were discovered scattered through a number of other tracings. In all of these the lengthened beat was just half again as long as the ordinary slow beats about it. The cause of this peculiar relation between the length of these beats becomes clear if we recall the hypothesis advanced to explain the doubling of the heart rate. According to this hypothesis, the slow rate results from a failure of the heart to respond to every stimulus received. If now occasionally, instead of failing to respond to every other stimulus, it

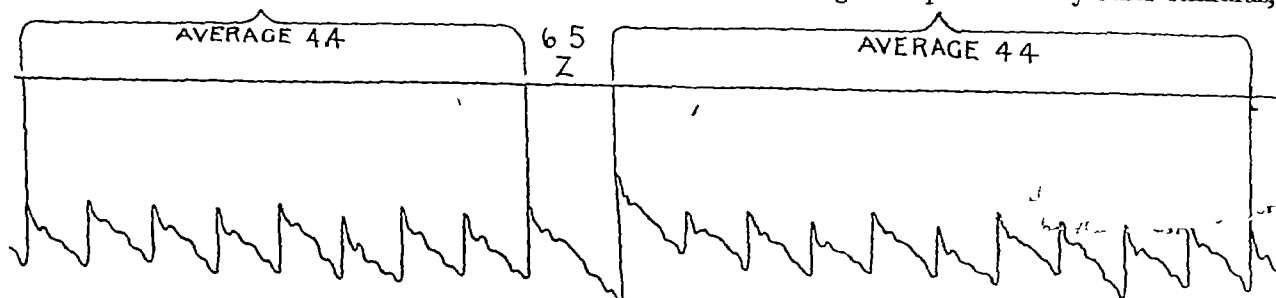


Fig 2—A long beat (z) interposed in the slow rhythm. Notice that its length 6.5 fifths of a second is one and a half times that of the other beats.

If this power to contract is not recovered quickly enough after a previous contraction, then every other beat may be omitted and the rhythm halved. As the power to contract gradually returns, we get beats of increasing size. So far as Figure 1 is concerned it will be noticed that the first beat to disappear entirely would have belonged to the series of larger pulsations (it being the second beyond "m"). From this it would appear that the smaller beats are not necessarily the ones that disap-

peared. If this power to contract is not recovered quickly enough after a previous contraction, then every other beat may be omitted and the rhythm halved. As the power to contract gradually returns, we get beats of increasing size. So far as Figure 1 is concerned it will be noticed that the first beat to disappear entirely would have belonged to the series of larger pulsations (it being the second beyond "m"). From this it would appear that the smaller beats are not necessarily the ones that disap-

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³ Kries, "Ueber eine Art polyrhythmischer Herzthätigkeit Arch. f. Anat. u. Physiol., 1902, Physiol. Abteil.
⁴ "Vorläufige Mitteilung über die Physiologie des Herzblocks, in Sitzber. Zentralbl. f. Physiol., vol. xix, No. 1

If clinicians could more often observe the pathology at the operating table in all its intensity, in some of the mild cases and in other cases of pronounced symptoms see a pathology limited to the appendix alone and with almost a doubt as to its departure from normal, they would grow more tolerant to operative measures and less wedded to therapeutics in the inceptive stage.

The physician or the surgeon who persuades a patient in the inceptive stage to wait for the interval assumes a responsibility wholly unwarranted, for the interval stage by no means comes to all, in some, opportunity has been knocked and unadmitted, has gone never to return.

Certainly the physician and surgeon have a common interest in saving the life of the patient, and the study by each of the pathology at the operating table must tend to a mutual conclusion as to the proper management of this disease in its various pathologic stages. This common study, we believe, is gradually growing toward, and will eventuate in, a universal professional belief that all patients with appendicitis if possible should be operated on if seen by the surgeon, during the first thirty-six or forty-eight hours. The failure to make a diagnosis on the part of the practitioner and the refusal of the family and patient to listen to a reasonable demand for operative measures in the inceptive stage are responsible for almost all the factors entering into the mortality of appendicitis.

Second The Rapidly Progressing Stage (third, fourth or fifth day) —The stand taken by a few surgeons that the appendix should be removed regardless of the stage of involvement is not in harmony with pathologic process known to be present at certain times of the disease. This is the stage in which experience and experiment have demonstrated that operative measures increase rather than lessen the mortality. It is in this stage that Ochsner enunciated a sound surgical principle: lavage and peristaltic rest by rectal feeding. The facts of its misconception and of its misapplication on the part of the medical profession in general by no means disprove the correctness of his theory. The probably enforced admission that this procedure has resulted in greater harm than good, probably increased the mortality of appendicitis in general in its first years of promulgation, by no means argues its nullification in eventually proving a life-saving procedure. The seizure of this treatment by the opponents to the surgical treatment of appendicitis in general in its application to all cases has proved a curse to humanity and a set-back to the advancement of proper surgical treatment of the disease.

That a better understanding and better education will confine the application to the class of cases intended by the author we believe to be a certainty. That the rapid attacks on Ochsner by some surgeons have been actuated by the commercial sting in the misapplication of his theory by the general practitioner and an apparent lessened number of patients for surgical and rather than the real scientific difference with him is plausible to a competent and unbiased observer. The admitted honesty of Ochsner, the extensiveness of his clinic for a number of years and the verification of his experience by a large number of other surgeons should be convincing evidence of the correctness of his theory, even if the critic has not the fairness to admit or the clinical material necessary to prove it in his own work.

Operation in this stage usually means rapid extension of the sepsis and death, peristaltic rest means a limitation of the lesion and a day most favorable for surgical intervention. That the duration of this rest period may and is often extended too long is the belief of many sur-

Not infrequently cases come to us from the general practitioner with the remark, "I put this patient on the Ochsner treatment, he improved for a time and then had a relapse."

There is a time when Nature totters under her burden and a leak takes place in her fortification, and the case extends into the general peritonitis stage unless the surgeon comes to her rescue at the proper time. Experience and good judgment must decide the time limit in these cases. The extreme position taken by Ochsner in the early promulgation of his treatment by waiting two, three or four weeks I believe to be unnecessary, as Nature will have done all the good in her power in from ten to twenty days.

Third The Non-Progressive or Subsiding Stage —Not infrequently an appendicular disease comes to the surgeon with all the symptoms and physical evidence of a subsidence. Reason would indicate that Nature in this case had mastered the situation for the time and would lead to a period of safety if judiciously assisted by rest and a guarded diet. Experience has fully convinced the conservative surgeon to keep hands off and to let these cases drift into the interval period. In these cases the disease seldom shows a tendency to relight into active progress unless the quietude is disturbed by injudicious dietetic measures or ignorant therapeutic applications.

Fourth The Interval Stage —This is the stage for self-congratulation for the one who reaches it—an unpromised but fortunate entrance on *terra firma* in the march of appendicular inflammation. This is the stage of sanguine hopes, splendid promises, ideal surgery and happy culmination by surgical operation. If the ideal management of appendicitis were possible, this stage would never be reached. If the surgeon could see all the cases in the inceptive stage there would be no interval stage, there would be no abscess stage, there would be no peritonitis stage and comparatively few fatal stages, but until the family physician the world over follows the lead of such men and internists as Billings, Fitz and Biggs, who favor and teach early operations, surgeons will have to continue to battle against the desperate stages with their uncertain termination.

Fifth The Abscess Stage —The patency of an abscess in the right side of the abdomen is convincing evidence to patient, friends and family physician that surgical interference is indicative and imperative. It has been proved within the last two years that the only way of elimination of the appendix from the abdomen is by excision, hence the explosion of the old theory that the appendix sloughed and came away with the pus and debris from an incised and drained appendicular abscess. Recurrence after simple incision, necessitating re-operation and the invariable presence of the original offending organ, has convinced surgeons that to cure appendicitis the appendix must be removed. Another observation worthy of note is the attachment of the appendix in all cases at the line of original incision.

Radical operators like Deaver and his followers, acting on the established fact that cure means removal, advocated and claimed to practice separation of the adhesions and removal of the offending organ in all cases with a low-rate mortality, this procedure, however, has been received with considerable doubt. Many surgeons following the teachings of Deaver, by reason of a large mortality, have been compelled to abandon this radical procedure and many others have never seen their way clear to follow it, but have been content with the simple drainage. Those more conservative and possibly more conscientious practitioners believe in two safe rather

THE Higerous operation in abscess cases I believe all cases of appendicular abscess patients that the first operation is only a preparatory for the removal of the appendix at a period not later than from five to eight weeks. Stage of Diffuse Peritonitis—In the past two years a change has been made in the treatment of those aged patients in whom the disease is in general took a pessimistic view of the results of operative measures, regarding these cases diffuse or general peritonitis. Operation here is left to the feeble men whose work is a discredit to the application of the natural laws of the body. The simple age as advocated by Fowler—that is, keeping the patient in the supine position—gave surgeons the cue to the rational efficacy of operative measures in this stage of appendicular disease. Trustworthy reported results of a few surgeons invited trial by surgeons in general, and this gave convincing evidence of the better results that may be attained by more perfected technique in this desperate class of cases. The debatable question here is not operation or non-operation, but the rudeness or tenderness of the aid offered. Shall we simply incise and effectively drain the dependent cavities, or shall we go further and attempt to flush out the offending debris? An investigation of the advocated method shows about an equal division on the part of operators for flushing and non-flushing. In the absence of reliable statistics and confirmation of the greater merits of either method, the individual judgment and experience of each operator must decide whether it is best to foster, to protect and to assist Nature, or by rough fingers to tear away the fibrous exudate and to wash septic material over an unsoiled territory. A limited experience and the careful consideration of the pathologic condition found in this stage leads me to believe that the least manipulation possible means the least mortality.

Medical men, as a rule, believe in the diluting and neutralizing effect of a serous exudate on the toxins of infection and admit that further dilution by salt water may prove beneficial, but why inflict greater trauma to an already wounded peritoneum by flushing when there is an innocent and equally beneficial route of dilution by the application through healthy avenues of absorption? We all realize the circumscribing fraction of a fibrous exudate which tear down the protecting wall to toxin invasion?

SUMMARY

I believe, with the mind open for conviction and liable to complete reversal by future advancement, that

First—Appendicitis is always a surgical disease

Second—Every patient should have and is entitled to operative measures within the first forty-eight hours

Third—The rapidly progressing stage is the stage of applicability of the Ochsner treatment, and this offers the lowest mortality

Fourth—Cases coming to the surgeon with evidence of gradually subsiding symptoms should be deferred to a more favorable operative period

Fifth—Operation should be urged in every interval and are in fact

and are in fact necessary to enumerate more cases two safe rather than one to illustrate the variety and the use of all dependent cases, and not

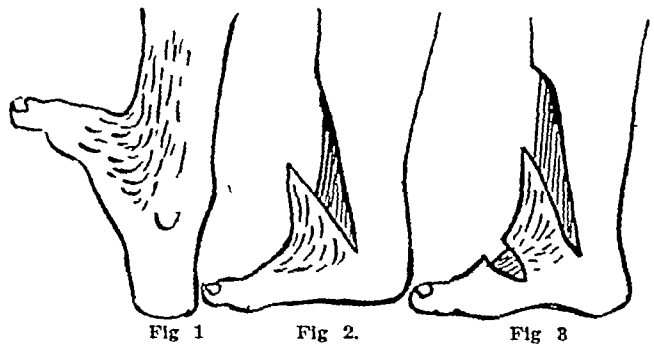
A METHOD FOR THE CORRECTION OF CICATRICAL TALIPES CALCANEUS *

A. F. JONAS, M.D.
OMAHA.

The method for the correction of some forms of old talipes calcaneus is illustrated by the two following cases

CASE 1—History—A. B., aged 20, when 4 years of age had the dorsum of the right foot and the lower third of the anterior aspect of the leg severely scalded, producing a sloughing of the skin from the entire burned area. The resulting wound was a long time in healing, which was accomplished by granulation, ending in a dense mass of cicatricial tissues, which in contracting produced an extreme dorsal flexion. After the lapse of several years two different attempts were made to correct the deformity by making a transverse incision, dividing all the soft structures down to the tibio tarsal joint. The foot was brought down to its normal position. The separation of the wound margins was so great as to produce a large, gaping defect over the dorsum of the foot. In spite of the attempt made to maintain a corrected position of the foot by means of variously constructed devices, the deformity recurred as soon as the operative defect closed over, which it only could do by a process of granulation and cicatricial contraction.

Examination—At the time of his admission to the hospital the following condition was noted. The right foot was in extreme dorsal flexion and very moderate varus position. The dorsum pedis was nearly in contact with the anterior aspect of



the leg and was held in this position by a thick, dense mass of scar tissue, which seemed intimately adherent to the tibia and the tarsus and metatarsus of the foot. The heel was drawn down so that the os calcis occupied a vertical position and the superincumbent weight was borne on the end of the bone. The posterior portion of the articular surface of the astragalus could be felt under the tendo Achilles. In fact, the backward pressure of the astragalus was indicated by an elevation making a visible posterior projection against the tendo Achilles. The foot was rigid in the extreme, dorsal or plantar flexion could be made only to the slightest degree. Phalanges were limp and could neither be voluntarily flexed nor extended. The deformity was due entirely to a dense cicatricial mass, involving the skin and all the soft structures, including the periosteum to which it was attached. This tissue involved an area beginning at the junction of the middle tibial third, surrounding nearly one-half of the tibia and extending downward to the middle portion of the tarsus.

Treatment—After the usual preparation of the foot, the following procedure was adopted. It was evident that a flap must be constructed to cover at least the greater part of the resulting tissue defect, which seemed unavoidable in moving the constricted structures. A pedicle flap, to be twisted so as to fit over the resulting defect in the tarsal tissue, was out of the question. It was evident that a flap with a broad attachment was necessary. The only available was a triangular flap, so constructed as to alone involve the tibia astragaloid joint when it should be opened, where the scar tissue reached down to and involved the tibia. The addition of the flap was necessary to correct the deformity.

* Read before the Western Surgical and Gynecological Association, Kansas City.

stated that they increase the amount of hydrochloric acid or of the digestive ferments.

Gottlieb, in experimenting on rabbits with the volatile oil of mustard and with pepper, found an increased pancreatic secretion both solids and liquids, from irritation of the gastric mucous membrane. He admits the possibility of the absorption of a part of such volatile substances and a consequent direct stimulation of the secretory cells of the pancreas, but he obtained a similar increase of pancreatic secretion by reflex stimulation in *impus irritants* 0.5 per cent acid and strong alkalis, which are not nearly so apt to be rapidly absorbed. Gottlieb's results with volatile oil of mustard have been criticized because he used as much as half a drop for a rabbit—a dose which might be termed massive considering the size or the weight of the animal, but the rabbit's gastrointestinal canal is probably not so easily irritated as is that of man.

In support of the claim that the pancreatic secretion is reflexly stimulated are the results of Bernstein and Heidenhain's experiments on dogs. These observers found that pancreatic secretion begins so soon as food is taken, when reflex stimulation alone could cause it.

All volatile oils have an antiferment action and the aromatics therefore may lessen gastric fermentation.

The slightly irritant effect, with the hyperemia, must be the main factors in their effects on digestion after that of reflex stimulation for pancreatic secretion has been found to be much more markedly influenced by the dilation of blood vessels and a consequently free circulation than by changes of blood pressure. Thus free secretion has been observed after chloral, with dilated vessels and low blood pressure.

In this connection it is to be remembered that nausea, pain in the stomach and other symptoms of functional disturbances of the gastrointestinal canal are often promptly relieved by external application of heat or even by a mustard footbath, which can only act reflexly.

It is easy to understand why pure air and interesting surroundings play such an important rôle in appetite and digestion when we consider how completely those functions are under the control of the reflexes, mere change of location being much less important than the substitution of interesting for monotonous surroundings, and in advising change of scene with outdoor life these details can not be too carefully considered.

Bitters, and more particularly the aromatic bitters, are indicated in loss of appetite when it is not due to grave gastric disturbances. When irritation of the gastric mucous membrane complicates the condition, an astringent bitter, such as *serpentaria*, *cinicifuga* or cinchona, should be used. In the absence of catarrh, indigestion accompanied by insufficient gastric secretion a simple bitter, such as gentian or calumba, may be used alone, but it is very much more often advisable to combine the simple bitters with aromatics.

The individual taste of the patient should always be considered in the choice of the aromatic. Men often like simple bitters, such as gentian or gentian and orange, a fact attested by the extraordinary popularity a few years ago of a certain bitter, which consisted practically of compound tincture of gentian. Women usually prefer mildly aromatic and not very bitter substances, while children are generally averse to them altogether.

When excess of acidity exists bitter substances will probably increase the trouble. Just as bitters and aromatics produce a greater effect in cases of functional disturbances, so iron is useful in anemia, though it has little influence in health, and it is often found advisable to combine iron with bitters, in which case the astringents are to be avoided because of their chemie reaction, whereby an inky mixture is formed, disagreeable alike to sight and taste—two great objections in this class of remedies.

Many bitters which are not usually classed as astringents contain enough tannin or similarly acting substances to give inky mixtures with ferric salts, such, for instance, are gentian and nux vomica. Calumba, therefore, is to be given the preference in all cases in which a bitter is to be combined with a soluble salt of iron. Detannated preparations of cinchona and even solutions of the cinchona alkaloids have little to recommend them in preference to calumba as a simple bitter.

The following is an example of a simple bitter combined with iron

R	Tinct calumbæ	℥m 100
	Tinct ferri chloridi	m lxxv 5
	Aque q s ad	℥vi 200

M Sig A tablespoonful may be given half an hour before meals to men, while a teaspoonful will usually suffice for women.

The possible combinations of aromatic bitters are infinite, and, as previously stated, the individual taste is to be considered rather than slavish adherence to any one formula.

Of the official aromatic bitters we may enumerate

CALAMUS—U S—(Sweet Flag)—The dried rhizome of *Acorus calamus* was known to the ancients and is still used largely in Europe, though not so popular in this country.

FLUIDEXTRACTUM CALAMI—U S—This is made with 75 per cent alcohol.

Average dose 1 cc (15 minims)

AURANTII AMARI CORTEX—U S—(Bitter Orange Peel)—The dried rind of the unripe fruit of *Citrus vulgaris* has long been used as an aromatic bitters, but is chiefly used as an addition to other bitter drugs, as in the compound tincture of gentian and the compound tincture of cinchona.

FLUIDEXTRACTUM AURANTII AMARI—U S—This is made with 65 per cent alcohol.

Average dose 1 cc (15 minims)

TINCTURA AURANTII AMARI—U S—This represents 20 per cent of the crude drug and contains 60 parts of alcohol.

Average dose 4 cc (1 fluidram)

Astringent Bitters

Drugs that might properly be classed as astringent bitters are numerous, and, therefore, we shall enumerate but a few of the more interesting or more popular.

CINICIFUGA—U S—The dried rhizome and roots of *Cimicifuga racemosa*, a plant that is a native of North America, have been used extensively in some sections of the United States.

FLUIDEXTRACTUM CINICIFUGÆ—U S—This is made with strong alcohol.

Average dose 1 cc (15 minims)

TINCTURA CINICIFUGÆ—U S—This is made with alcohol.

Average dose 4 cc (1 fluidram)

SERPENTARIA—U S—The rhizome and roots of *Aristolochia serpentaria*, popularly known as Virginia snake-root, have been used in Europe for over 200 years.

FLUIDEXTRACTUM SERPENTARIÆ—U S—This is made with 80 per cent alcohol.

Average dose 2 cc (30 minims)

TINCTURA SERPENTARIÆ—U S—This represents 20 per cent of the crude drug and is made with a menstruum containing 65 parts of alcohol.

Average dose 4 cc (1 fluidram)

HYDRASTIS—U S—The rhizome and rootlets of *Hydrastis canadensis*, a perennial plant that is indigenous to Canada and the United States east of the Mississippi River.

FLUIDEXTRACTUM HYDRASTIS—U S—This is made with a menstruum containing 60 parts of alcohol, with glycerin and water, and should contain not less than 2 per cent of hydrastin.

Average dose 2 cc (30 minims)

TINCTURA HYDRASTIS—U S—This represents 20 per cent of the crude drug and is made with 65 per cent alcohol.

Average dose 4 cc (1 fluidram)

CINCHONA—U S—While undoubtedly better known and more extensively used as a bitter stomachic than either of the above, it is unnecessary to recount the origin or the uses of this drug. It is official under two titles, cinchona and cinchona rubra. Of the former we have

FLUIDEXTRACTUM CINCHONÆ—U S—This is made with 80 per cent alcohol and contains 4 per cent of ether soluble alkaloids from cinchona.

Average dose 1 cc (15 minims)

TINCTURA CINCHONÆ—U S—This represents 20 per cent of the crude drug and should contain 0.75 per cent of cinchona alkaloids.

Average dose 4 cc (1 fluidram)

2 While small doses of iron well diluted, may be given with bitters before meals, if larger doses are given after eating they are borne better than they would be if given on an empty stomach.

The only official preparation of red cinchona is the old and still popular Huxham's tincture of bark.

TINCTURA CINCHONÆ COMPOSITA—U S—This represents 10 per cent of red cinchona, 8 per cent of bitter orange peel and 2 per cent of serpentaria.

Average dose 4 c.c. (1 fluidram)

For an astringent bitters the fluid extract or the tincture of cinchona, cimicifuga or serpentaria may be combined somewhat as follows:

R Fl ext cinchonæ
Tinct gentianæ comp, ññ 5xii 60

M Sig One teaspoonful to be given before meals

For women it will be well to increase the amount of aromatics, in which case the compound tincture of cardamon may be substituted for the compound tincture of gentian and the mixture even further diluted with aromatic elixir, if thought desirable, as follows:

R Fl ext cinchonæ 3v 20
Tinct cardamomi comp
Elixir aromatici, ññ 3x 40

M Sig One teaspoonful of this mixture, with water, to be given before meals

NUX VOMICA—U S—The dried ripe seed of *Strychnos nuxvomica*, although not containing sufficient tannin to be classed as an astringent bitters, is frequently used as a bitter stomachic. The available preparations are:

FLUIDEXTRACTUM NUCIS VOMICÆ—U S—This contains 1 per cent of strychnin

Average dose 0.05 c.c. (1 minim)

TINCTURA NUCIS VOMICÆ—U S—This contains 2 per cent of extract of nux vomica and is assayed to contain 0.1 per cent of strychnin

Average dose 0.6 c.c. (10 minims)³

Carminatives

The origin of this word is in doubt, some authorities maintaining that it comes from *carmen*, a charm, and the term is even now used somewhat loosely for those agents which produce a sense of warmth and well being and which act as antispasmodics, or which expel gases from the gastrointestinal canal. When given with cathartics they lessen the griping pain of these drugs, and, being antiseptic, they inhibit the formation of gas by fermentation.

According to the accepted definition, a greater or less number of substances can be included in this particular class. The official carminatives afford a very wide range of choice, as they include practically all aromatic bitters, nearly all the aromatic volatile oils, besides such substances as ginger and capsicum, which contain pungent resinous constituents, alcohol, ether, chloroform and many other agents which produce a sense of warmth when swallowed.

Carminatives are among the most ancient of remedies and are indicated in pain in the stomach or bowels when due to simple indigestion or distention by gas, but not when there is inflammation, in the latter case—for instance, in appendicitis or in peritonitis—carminatives are apt to augment the trouble.

Many of the substances are well known as household remedies and, therefore, it will suffice to enumerate only the more important ones.

ZINGIBER—U S—Ginger has been used from time immemorial in eastern Asia, it was well known to the ancient Greeks, and is even now perhaps, the most popular of all the carminatives. The most widely used of the official preparations is the tincture

TINCTURA ZINGIBERIS—U S—This represents 20 per cent of the crude drug exhausted with alcohol

Average dose 2 c.c. (30 minims)

FLUIDEXTRACTUM ZINGIBERIS—U S—This is an alcoholic extract

Average dose 1 c.c. (15 minims)

OLEORESINA ZINGIBERIS—U S—This is now directed to be made with acetone

Average dose 0.03 gm (½ grain)

Half a teaspoonful, as noted above, of the tincture may be given in a little hot water or with sugar.

The oleoresin is much more active, and a drop of it may be thoroughly well mixed with powdered sugar and from one-eighth to one-fourth of the quantity given to a child, but not to an infant. It may also be added in half drop doses or less to bulky cathartic pills or mixtures, but in either case it should be well diluted.

THE OFFICIAL MINTS

Of the large number of aromatic drugs of the mint family, two have attained more than ordinary popularity as carminatives. The revisers of the Pharmacopeia have, indeed, been impartial in their description of these two substances and have treated them absolutely alike, so that from their status as official drugs it would be difficult to say whether peppermint or spearmint should be accorded the preference. It will be safe to assert, however, that peppermint is the more widely used. It is official as:

MENTHA PIPERITA—U S—(Peppermint)—The dried leaves and flowering tops

Average dose 4 gm (1 dram) This is sometimes used in infusion

OLEUM MENTHÆ PIPERITÆ—U S—This is a volatile oil distilled from the fresh and partly dried leaves and flowering tops of peppermint

SPIRITUS MENTHÆ PIPERITÆ—U S—This is an alcoholic solution of 10 parts of oil of peppermint filtered through 1 part of bruised peppermint, which imparts to it a distinct greenish color

Average dose 2 c.c. (30 minims)

AQUA MENTHÆ PIPERITÆ—U S—This is a saturated aqueous solution of oil of peppermint

Average dose 15 c.c. (4 fluidrams)

As noted above, spearmint, *Mentha viridis*, is official under closely corresponding headings and the uses are, of course, the same.

The uses of these official mints are too numerous and too well known to require description in detail. They appear to be particularly useful in gastric fermentation, for which purpose they are usually given in connection with a mild alkali, like sodium bicarbonate, preferably in the well known mixture of soda mint of the National Formulary or the widely used soda mint tablets.

Accumulations of gas in the stomach which prove most distressing can often be promptly relieved by administration of 20 grains of sodium bicarbonate or potassium bicarbonate dissolved, preferably in hot water, to which from 10 to 20 drops of spirit of peppermint or spearmint may be added.

ASAFETIDA

ASAFETIDA—U S—A gum resin obtained from the root of one or more species of *Ferula* was held in high esteem by the ancient Greek physicians and has been popular with all classes of medical practitioners since that time.

Average dose 0.25 gm (4 grains)

As an addition to other carminatives, asafetida in substance was at one time very popular. At present it is but infrequently administered in any other form than suppositories. These are largely used after surgical operations to overcome the atony and partial paralysis that frequently accompanies surgical in-

4 The mistura soda et mentha of the National Formulary consists of

Sodium bicarbonate grs ixxv 5
Aromatic spirit of ammonia m l 1
Spearmint water to make 3iii 100

Mix and filter

The average dose of this preparation is from 2 to 3 teaspoonfuls. Soda mint tablets as furnished by manufacturers usually consist of 0.3 gm (5 grains) of sodium bicarbonate with 0.002 (1/30 minim) of oil of peppermint.

³ A mixture of nux vomica and sodium bicarbonate offers a number of advantages as an efficient and comparatively harmless stomachic. It is made as follows:

R Tinct nuci vom
Sodii bicarb
Aque dest q s ad

m lxxv 5
gr cl 10
3v 150

Although technically this formula involves an incompatibility practically it is very satisfactory indeed. If the mixture is filtered and allowed to stand for 24 hours before being dispensed it will be found to have developed a very pleasant ethereal odor that adds materially to its effectiveness. The usual dose for adults is one tablespoonful before meals. For a patient with chronic constipation the addition of 1 or 2 c.c. (15 to 30 minims) of the fluid extract of *Cascara sagrada* will be found to be highly satisfactory. One argument in favor of this combination is that it contains little or no alcohol.

The external application of the salts of lead in the form of solutions and ointments sometimes produces discoloration of the skin of a brownish or black character

Foucaud de l'Espagne reports the case of a woman who was ordered a cytrate of lead as an eye wash, under the advice of another physician she was at the same time using sulphur baths for rheumatism. A black discoloration of the eyelids ensued and spread over the cheek bones, which was removed after six days by bathing the parts with infusion of herbs

The internal administration of the salts of lead may cause an erythematous rash of the skin

Snow, quoted by Peffard, reports a case where the body became spotted by petechiæ from the internal use of carbonate of lead

3726 Baring Street

ACUTE ACETANILID POISONING

JOHN BOYD TYRRELL, Sc.M., M.D.

SAN FRANCISCO

C. H. M., male, aged 52, came to this city from his home in Idaho to visit relatives. While here he complained of severe headache most of the time. Not getting relief from ordinary "headache pills" and "headache powders," he went to one of the local drug stores and bought an ounce of acetanilid in powder, bulk, took it to the hotel at which he was stopping, and took what he said was a half teaspoonful. He was relieved of his headache in a short time, and in about two hours went down town to do some shopping. As he was walking down town he noticed that he was weak, but paid no attention to it. He went into a barber shop for a shave, and scared the barber by his "terrible blueness," as the barber expressed it to me afterward. However, the barber shaved him, and felt very much relieved after the man had left the shop.

From the barber shop the patient went to a clothing store, where one of the clerks noticed his condition. In a few minutes he was seen to sway, become extremely cyanotic, and go to the floor in a "dead faint." I was immediately called and found him in deep syncope, extremely cyanotic, and with pulse very feeble and rapid.

I gave him strychnia, digitalin and nitroglycerin in combination, also artificial heat and fresh air, and re-suscitated him. In about three minutes he went into another attack of syncope. I again gave him nitroglycerin, gr 1/100, to which his heart responded, and kept him quiet for several hours, during which time he had several slight attacks of syncope. Patient gradually recovered.

I believe that acetanilid poisoning is more common than is usually believed, due to the laxness of laws regulating the sale of such products and especially the sale of the nostrums containing this treacherous drug as their principal ingredient.

THE ADAMS-STOKES SYNDROME AND THE BUNDLE OF HIS

I. O. JELLYCK, M.D. C. M. COOPER, M.D., WILLIAM OPHULS, M.D.

SAN FRANCISCO

We desire to put on record a case of acute epididymitis, probably gonorrheal in origin, leading to septicemic symptoms, in the course of which the Adams Stokes syndrome appeared fourteen days before death. The autopsy of the heart demonstrated anemic necrosis of the muscular septum in the region of the bundle of His, consequent on a recent thrombosis of its nutrient arteries. Elsewhere the heart muscle was healthy.

New Instrument

A NEW UTERINE DILATOR

FREDERICK LEAVITT, M.D.

ST. PAUL, MINN.

To open the mouth and neck of the pregnant uterus artificially is difficult under favorable conditions, to do so when the conditions are unfavorable is one of the most trying operations in all surgery.

Under some conditions of the os and cervix, manual dilatation is more or less easily accomplished, but there are other cases in which the fingers are utterly useless. Consider the tissues to be overcome—a fibromuscular canal so firmly closed normally that with all the burdensome pressure of gravity it remains intact, even the force of strong labor causing it to yield only after many hours of exhausting effort. If it takes Nature ten or fifteen hours to effect an opening, what shall we say of a device that will accomplish such a feat within an hour and do it safely?

While the hand is a dilator always at command there are disadvantages accompanying its use. First, it can not be thoroughly sterilized, and, second, it will tire. The frequent alternate use of both hands, with an assistant's hands brought into service in tedious and difficult cases, multiplies the chances of infection. Manual dilatation, therefore, is a truly surgical procedure.

The dilator I have devised is an instrument of four levers and a handle with a large fulcrum on one end and a smaller one on the other. Each blade is notched near its middle, and when placed in position for dilating, the notch fits into a suitable depression on the edge of the fulcrum. The ends of the levers—the blade part—are designed to enter the cavity of the uterus only so far as may be necessary for the work to be accomplished. The gynecic end is long and slender, the obstetric end short and broad. During pregnancy, particularly toward its close, there would be no difficulty in introducing the broader ends of the levers, since they may be introduced one at a time. Dilatation may be carried on by compression with the hands alone, with the rubber alone, or, what is very practical, with manual and elastic force, both applied at the same time, the one supplementing the other. If intermittent pressure be desired, opposing blades may be compressed even while the rubber is doing its part of the work.

The instrument is simple in construction. There are no screws or nuts to adjust, there are no hinges or joints to become rusty, no detachable parts to get lost. There are only five pieces to the whole instrument, and they are very plain and easily cleaned. It is self retaining as soon as the second blade is in position. It is light, yet strong enough to do twice the work demanded of it. It does not obstruct the field of operation. The process of dilatation may be closely watched, the parts sponged, and the presenting part palpated—all between the blades of the instrument. If occasion demands great haste, this also permits the making of multiple incisions into the cervix after the method of Dührssen. The degree of dilatation is approximately that of the hand, i. e., eight and one half inches in circumference. For all practical purposes this is deemed sufficient.

The manipulation of the device is easy. The patient is brought to the edge of the table and the knees supported in the lithotomy position, the posterior wall of the vagina is depressed with a speculum. The Edebohl speculum is very serviceable, as it is self retaining when weighted, besides, it dilates the outlet of the parturient canal. The first blade of the dilator is introduced up to the shoulder of the blade (Fig 1). On this is placed the fulcrum of the handle, the notches fitting into each other (Fig 2). The second blade is introduced similarly and should be placed opposite the first one. A small rubber band (Fig 3) is now slipped over the free ends of the levers, in order to keep them in position. The two remaining blades are placed in apposition, the rubber band slipped over each as it is put in place (Fig 4). When all four blades are properly adjusted (Fig 5), active dilatation is begun and maintained by winding around the ends of the levers one or

1 In this connection see editorial in THE JOURNAL March 3 1906 pag 675

more rubber bands. These are not slipped over the blades as with the smaller one, but are wound around them. To do this dextrously the band is looped over any one of the blades, put on the stretch, and carried around once, twice, three, as the

case may be, the other end being made fast by slipping it in turn over any one of the blades. Any good rubber band of average size is competent to dilate the os uteri in a reasonably short time—say, thirty to forty five minutes. As dilatation progresses (Fig 6) and the ends of the levers are brought together, the band may be loosened and reapplied—take an

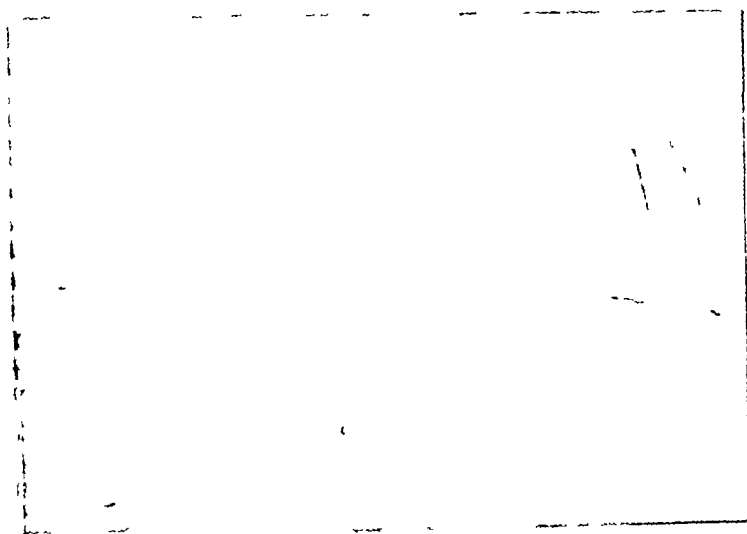


Fig 1—Introducing the first blade

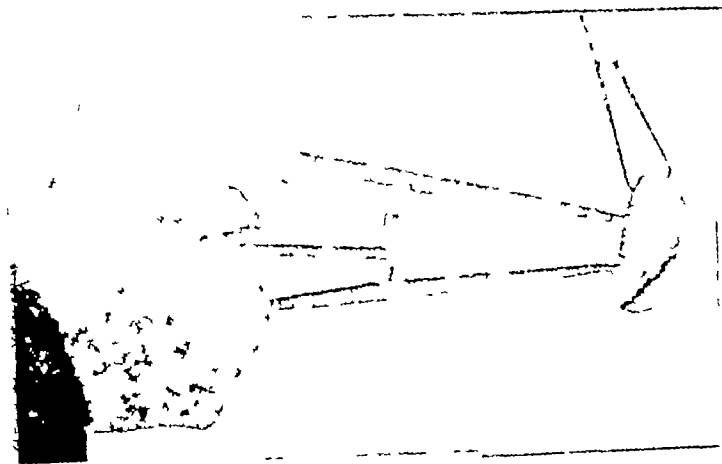


Fig 2—The first blade in position the fulcrum adjusted to it and ready to receive the second blade

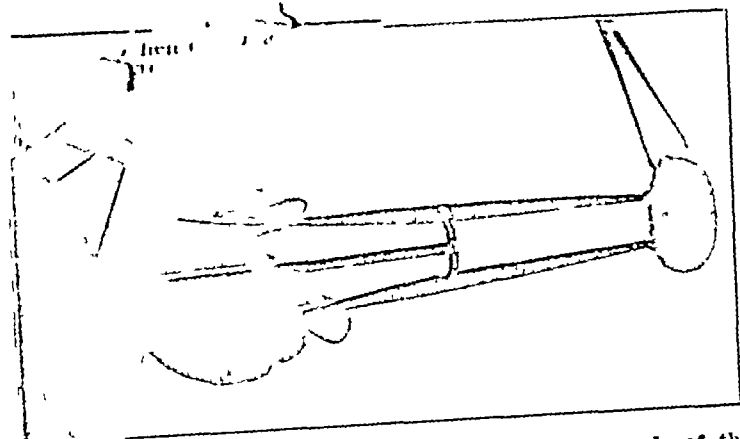


Fig 3—Slipping a rubber band over the proximal ends of the levers (calculating from the operator) already in working position

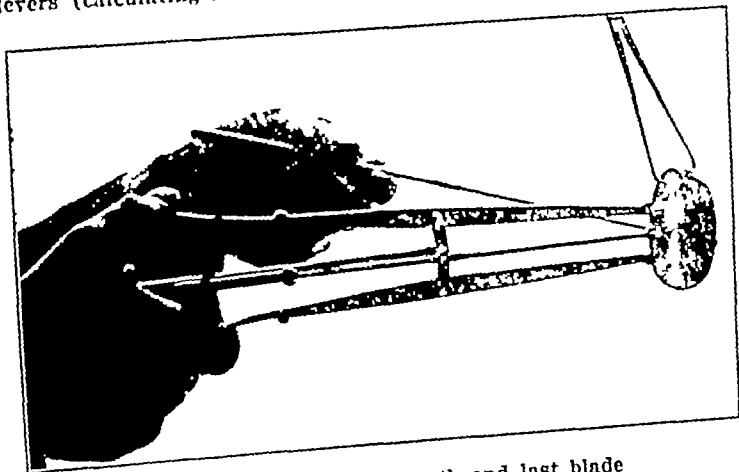


Fig 4—Adjusting the fourth and last blade

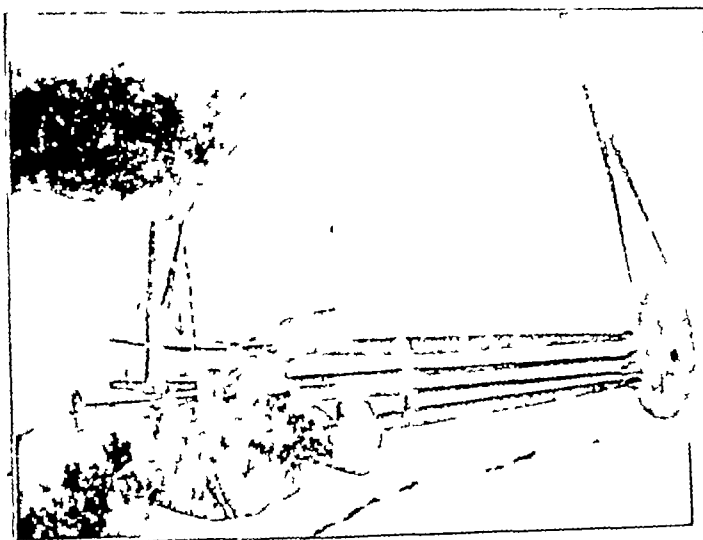


Fig 5—All the blades in position and held in place by a rubber band. Active dilatation is begun and maintained by means of a rubber band of average size and strength. As dilatation progresses, each band may be released and reapplied, each time fastening the free end a little further around.

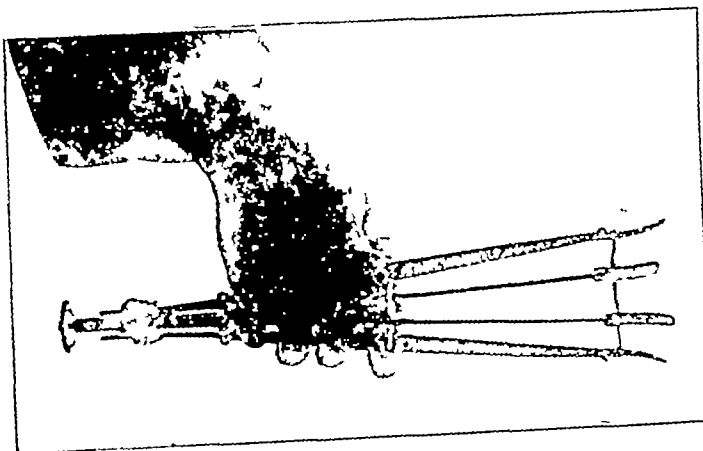


Fig 6—Showing the amount of dilatation possible when using the larger or obstetric end of the handle

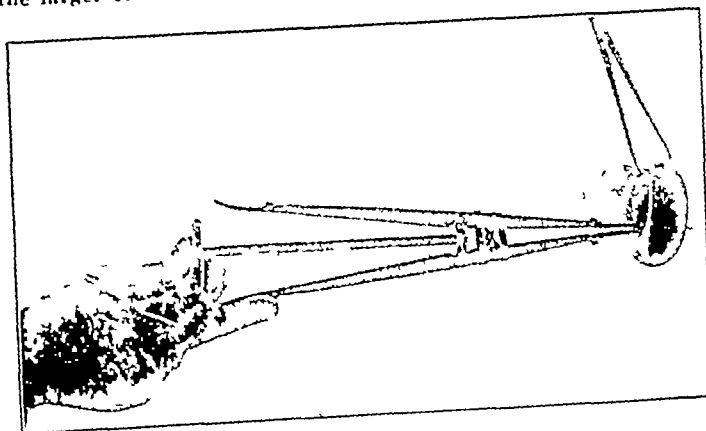


Fig 7—The levers in position for dilating the cervix for gynecologic purposes. The rubber band near the fulcrum is simply to hold the blades in place on the handle. After dilatation has progressed sufficiently, the third and fourth blades also may be applied if desired.

extra turn—or another band may be used to supplement the first one (Fig 7).

The instrument has been used in St Paul during the past year and a half with success that warrants its recommendation.

125 Lowry Arcade

New Appliance

A NEW REAGENT OUTFIT FOR CLASSES IN BACTERIOLOGY

E GUY HOPKINS, MD

Lecturer on Bacteriology and Demonstrator of the Microscopical Laboratories, University College of Medicine, Richmond, Virginia and Clinical Pathologist of the Virginia Hospital

RICHMOND, VA.

In order to meet the requirements of economy, simplicity and neatness I have devised the reagent outfit here illustrated for the use of my classes in the microscopic laboratories of the University College of Medicine, Richmond, Va

This outfit consists of a tube rack and a set of reagent containers (Fig 1)

The rack consists of a block of wood 2x2x6 inches, bored with 12 holes $1\frac{3}{4}$ inches deep by $\frac{3}{8}$ inch in diameter

The containers consists of 12 small test tubes, 100 mm. long by 8 mm inside diameter These tubes are equipped as follows

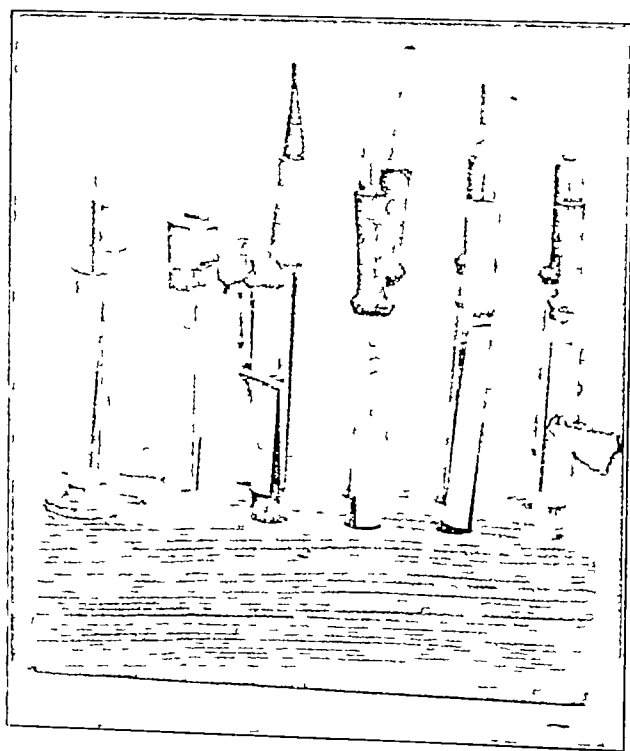


Figure 1

One is fitted with a cotton mop and contains vaselin for sealing hanging drop preparations Three are fitted with ordinary cork stoppers and contain respectively, alcohol, acetic acid alcohol, and water Eight have pipette points attached to their mouths by means of rubber tubing 35 mm long, 7 mm outside diameter and 5 mm inside diameter, the pipette points are 20 mm long and are drawn from 6 mm glass tubing, these tubes contain respectively distilled water, Gram's solution, 1 per cent sulphuric acid, Bismarck brown, Loeffler's methylen blue, carbol fuchsin, Gabbett's solution and anilin gentian violet

Each container is supplied with enough solution for from 15 to 20 coverslip preparations When in use the container is inverted over the coverslip and the rubber is compressed between the finger and thumb until the desired amount of fluid has been expelled Relaxation of the rubber then causes re-entrance into the tube of any fluid adherent to the point, so that there is no leakage down the side when the container is replaced in the rack (Fig 2)

If it is undesirable to leave a container open, even by so small an aperture as the point of the pipette, it may be effectively

closed by folding the pipette point back against the side of the test tube and confining it there by a small rubber band, thus making a stopper of the rubber tube

When the containers become empty they are refilled from stock bottles fitted with siphons These siphons have long pointed distal limbs, so that in filling a container it is necessary to remove only the pipette point from the rubber tube, which remains attached to the test tube (Fig 3)

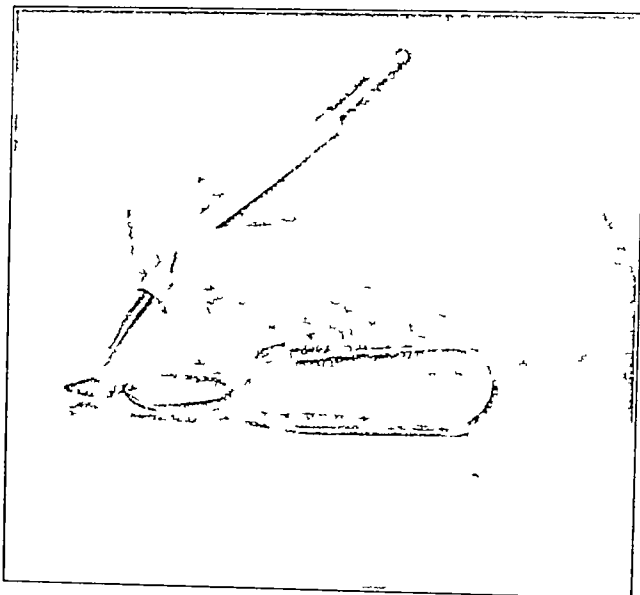


Figure 2.

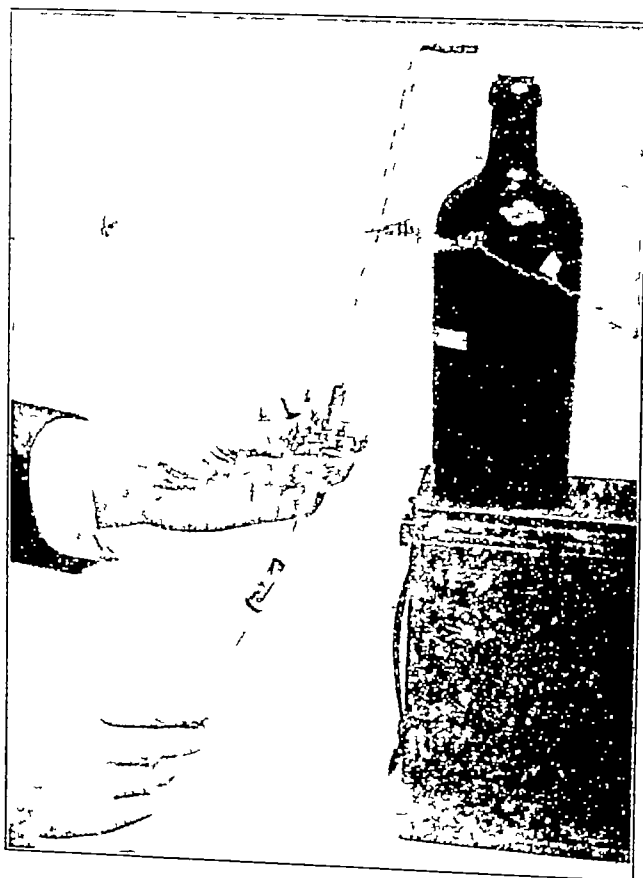


Figure 3

After a critical experience with this outfit, covering a period of three months, with a class of 76 students, I find it admirably adapted to the purpose for which it is designed The same principle with slight variations has also been applied in preparing outfits for other laboratory classes

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THE PHYSICIAN AND PSYCHIC TREATMENT

All through the history of medicine it has been recognized that the influence of suggestion plays an important role in therapeutics. The physician's assurance with regard to the significance of symptoms and as to the prognosis of the case has always been acknowledged as distinctly curative in tendency. Suggestion, however, has always been considered of secondary importance and in the organic affections this is especially true. In recent years there have been many developments pointing to the therapeutic influence of the mind over the body whenever suggestion can be used with good effect, especially in regard to so-called functional conditions. Nearly a century ago Mesmer claimed that a number of presumably serious symptoms could be effectively cured by suggestion either in the hypnotic condition or in the waking state. In more recent times the success of mental healing and of Eddyism has called renewed attention to these facts. The frequently announced new remedies that prove after a time to be not so effective as was at first thought, because their novelty has worn off, provides further confirmatory evidence of the therapeutic value of suggestion.

During the past decade a number of contributions to practical therapeutics have been made that recommend the use of suggestion, not as a merely secondary and accessory method of treating certain functional diseases but deliberately, as an independent therapeutic agent. Two valuable contributions of this kind have recently appeared. In the last volume of "International Clinics,"¹ Dr. Ballet, physician to the Paris hospitals directs attention to psychotherapy in nervous diseases. He emphasizes the undesirability of using hypnotic suggestions in most of the functional neuroses, since not infrequently it leads to a further weakening of the will and a consequent loss of control over nervous conditions. He has found, however, that ordinary persuasion and rational discussion of symptoms with a patient will often prove sufficient to remove symptoms that have been a source of suffering for a long period. Dr. DuBois,² professor of neuropathology at the University of Berne, Switzerland, has published a book,

which we reviewed recently, in which the proper use of psychic treatment for nervous diseases is systematically considered.

Both these authorities have picked out certain underlying conditions which are causative of nervous symptoms and which they have found amenable to psychic treatment. The most important of these are the fixed ideas and the so-called phobias or fears which often prove sources of so much worry to patients as to bring about extremely annoying and persistent symptoms. Fixed ideas are especially likely to rule over the digestive tract and must be removed before any of the many forms of neurotic dyspepsia can be lastingly improved. Patients become convinced that they can not take certain kinds of food or that beyond a certain quantity their digestive organs are unable to dispose of it properly, and then a whole round of symptoms is likely to develop, because of the lack of nutrition consequent on food limitation. More is accomplished by carefully removing such fixed ideas than by the administration of the most nicely adjusted digestive remedies or the use of the most powerful ferments and enzymes to aid the ordinary ferment processes.

Phobias are especially likely to affect the heart and the cerebral circulation. Two very important sets of symptoms develop as a consequence. The heart palpitations of neurotic patients constitute one of the most important sets of symptoms with which physicians have to deal. Pseudo-angina-pectoris, with positive pain in the precordia and a sense of impending death, occurring in young persons without any signs of arterial degeneration or any symptom of a heart lesion, is the worst of these, but the symptoms may exist in minor degrees down to simple palpitation. Not infrequently the sleep is disturbed as a consequence of the patient's solicitude with regard to the possible consequences of these symptoms, and the result is another element in the vicious circle that gradually undermines the patient's physical condition. Insomnia itself in its varying forms, probably due more to disturbances of cerebral circulation than to any other single cause, comes under the same head and is often rendered persistent by the patient's anxiety as to whether or not he will be able to sleep, and his constant fear lest his loss of sleep should eventually lead to intellectual deterioration and perhaps to insanity.

Any physician of experience knows how difficult it is to treat such patients by any of the ordinary remedial measures. He is aware, also, how often such conditions are improved by the changed state of mind consequent on a series of interviews with a mental healer or the suggestive influence of some one who has insisted with authority that the condition can surely be cured. The deliberate use of persuasive suggestion in these cases is recommended by Ballet and DuBois as the most efficient remedy and one whose influence will persist longer than any other method of treatment. The suggestion

¹ International Clinics, Fifteenth Series vol IV, 1906

² "The Psychic Treatment of Nervous Disorders," by Dr. Paul DuBois, translated and edited by Dr. Smith Ely Jelliffe, and Dr. William A. White, New York. Reviewed in THE JOURNAL, March 10, 1906

may have to be repeated on a number of occasions, but if the physician can assure his patient that there is no organic lesion of heart or brain, either existent or impending, then improvement is usually a matter of only a short time. There seems to be no doubt that the deliberate use of this method of psychotherapy would add a new and efficient therapeutic agent in the treatment of what are usually very obstinate cases.

Its more general employment by the general practitioner would lessen the number of patients who now tire of the consumption of drugs from which no benefit is derived or from which only temporary relief is obtained, and who eventually find their way at the present time into the hands of quacks and charlatans of various kinds. All physicians employ suggestion to some degree, but there is room for its employment to a much greater extent and in a wider field with benefit to rational medicine, to physicians and to their patients.

DRINKING IN GREAT BRITAIN

The drink bill of Great Britain is enormous, and drinking among women is reported to be more prevalent than ever, though statistics show that excessive consumption of alcoholic beverages is on the wane. In fact, it would seem that "a wave of sobriety" is at last passing over that country.

Dr Dawson Burns, in a recent communication to the *London Times*, compares the expenditure on alcoholic liquors for 1905 and 1904, respectively, and finds a decrease of no less than \$24,050,000. This is a substantial decrease, but as the total amount expended on drink still reaches the immense sum of \$820,000,000, more or less, there is ample room for further improvement in this direction. Undoubtedly the drinking habits of the population at large of Great Britain, and especially of town dwellers, are responsible for much of the physical and mental degeneration which are now obvious features in the large centers of population throughout the United Kingdom. Efforts are made to minimize the significance of the conditions of urban life, but it seems to be acknowledged that insanity is on the increase and has been making rapid headway for the past thirty years, and that the race has deteriorated physically and mentally. Such decadence must be attributed, in great part at least, to the tendency of the population to desert the country for the towns, in consequence of which the towns are overcrowded and present in most respects conditions of life inimical to sound health. And of all the agencies prejudicial to health which beset the dwellers in cities, none has so deadly an effect on the body and mind as has strong drink.

It must be reassuring to our British cousins to find that their drink bill is showing a steady and continuous decrease. The total diminution in expenditure on drink in six years has been nearly \$110,000,000, or, allowing for increase of population in the neighborhood of \$170,-

000,000. The reasons for this comparative and continuous tendency to more temperate habits among the British can not be stated off-hand. Perhaps "hard times" has had much to do with the "wave of sobriety," although it is asserted by many who are in a position to know whereof they speak that the somewhat altered situation is due to a diminished desire for alcoholic beverages. It is to be hoped that the latter explanation is the correct one, and that the people of Great Britain are beginning to recognize the folly of their ways and to appreciate the fact that drink has already sapped, in some degree, the vitality and energy of the race, and that unless the habit be checked matters will go from bad to worse. Dr Burns calculates that the expenditure for drink per capita in England is nearly \$20, in Scotland slightly more than \$15 and in Ireland even less.

Without seeming to be pharisaical and thanking God that we are not as other men are, we may lay the flattering unction to our souls that as consumers of strong drink we are far behind our European brothers. These remarks, however, must apply to the country as a whole. In many of the cities, so far as the drink question is concerned, conditions approximate those that exist in European cities. Even in the cities we are greatly in advance of Great Britain in all that concerns the hygiene of saloons. The *Lancet* recently published articles dealing with the "public house" as a factor in the spread of disease, in which was pointed out the unsanitary state of affairs as regards the ordinary British saloon, and a contrast was drawn between this class of establishments there and here, which was greatly in favor of the American saloon. The employment of barmaids was also made the subject of a scathing editorial in a later issue of our London contemporary.

In this country we are at all times, perhaps, too ready to "pat ourselves on the back" with regard to the superiority of our institutions generally, but when a conservative journal like the *Lancet* acknowledges that in the management of saloons, regarded from a sanitary standpoint, the United States easily leads, we may be allowed to plume ourselves on our progress without laying ourselves open to the charge of being unduly impressed with the manifold advantages of our own land and institutions. The drink problem is undoubtedly the most serious that confronts the inhabitants of Europe, leading, as it does, to the loss of physical and mental vigor. Here the question may be of lesser import but it is one that can not be lightly regarded.

THE EFFECT OF ROENTGEN RAYS ON THE BLOOD FORMING ORGANS

At first there was a tendency to deny or to doubt that the Roentgen ray had any special effect on internal organs or processes, but two practically simultaneous yet independent events showed that this assumption was wholly without foundation. The first of these events

in point of time was the observation of the remarkable effect of Roentgen rays on the course of pseudoleukemia and leukemia (Pusey, Scnn, Brown and others), to the treatment of which they were applied in a more or less empirical way. The second event was the demonstration by Heinecke (1903-1) of the elective destructive action of the rays on the lymphoid tissues in the spleen, lymph nodes and bone marrow.

In this country the effect of the Roentgen rays on the blood-forming organs has been studied especially by Warthin¹ who combines experimental work with the study of material from leukemic patients treated with Roentgen irradiation. His experimental work shows that the rays cause nuclear disintegration and necrosis of lymphoid myeloid and epithelioid cells in small animals after very short exposures and commonly most marked in the spleen. This destruction may be succeeded by regenerative processes that may pursue a protracted course. Exposures of five hours kill mice, rats, rabbits and guinea-pigs after a few days, the symptoms permitting the interpretation of an intoxication from disintegrative processes in cellular protein material.

The selective effects of the Roentgen rays demonstrated by Heinecke, Warthin and others explain the therapeutic action of the rays in leukemia—it is due to removal of leucocytes from the general circulation, the spleen, etc.—and to delay in the production of new cells. The final result to be obtained by this treatment is still a matter of some uncertainty and it seems doubtful whether or not the underlying and essential causes can be totally removed. The leukemic state may be resolved into an aleukemic one (Warthin's Case 1) "or it may even assume the type of a sarcoma" (Warthin's Case 3). The destruction of enormous numbers of leucocytes by this treatment is in itself dangerous, because of the formation of neurotoxic and other poisons and because of grave changes in the kidneys, characterized especially by extensive calcification due to excretion of poisonous substances as shown well in Brown and Jack's original case (Warthin's Case 1). As put by Warthin, the problem resolves itself into this: "How much of the abnormal leucocyte-forming tissue in the bone marrow, spleen or lymph glands can be destroyed by Roentgen rays before the patient succumbs to the disease or to the treatment?" He suggests that in early cases a cure may be effected.

This situation calls for continued investigation in the hope that some means may be discovered that will render this at first so promising a treatment for so hopeless a disease as leukemia really effective and practicable. Thus the mechanism of x-ray destruction of leucocytes is yet wholly obscure. Investigation by Capps and Smith,² as well as others, shows that there develops a leucotoxic substance in the blood of leukemic patients treated with Roentgen irradiation, whose serum on in-

jection into other patients promptly reduces the number of leucocytes.

The data at hand concerning this substance are yet too few to permit of much speculation concerning its nature and other qualities. Suffice it to say that in the Roentgen ray we have an agent with special action on the leucocytes and blood-forming organs and that the continued study of this effect from various points of view certainly will yield important results as regards the diseases that affect these organs.

THE ARMY MEDICAL REORGANIZATION BILL

The leading editorial in the *Army and Navy Journal* for March 10 comments on the inexplicable action of Senator Hale of Maine in his opposition to Senate bill No. 1539, to increase the efficiency of the medical department of the United States Army, a bill the urgency of which is acknowledged not only by the medical corps, but by the line of the army. THE JOURNAL has repeatedly referred to the necessity of the passage of this bill which deals with a question of vital importance to the entire military service. In the editorial it is stated that "it is an amazing and disheartening thing that a bill now pending in the Senate, which seeks to correct the admitted deficiencies in the Medical Department of the United States Army, should encounter an unreasoning and indefensible opposition at the hands of a distinguished Senator—Mr. Hale of Maine. Ever since the anxious days immediately preceding the outbreak of the Spanish war he has maintained an attitude of obstruction toward nearly every important measure relating to the national defenses."

The bill was passed by the Senate February 5, but Senator Hale, who was not present at the time, later demanded that the bill be reconsidered, and, in conformity with senatorial courtesy, this was done and the bill was restored to the calendar. It came before the Senate again on March 6, where it met a most arbitrary and irrational opposition from Senator Hale, and the measure went over. Without seeking to fathom or to impugn the motives of the Senator for endeavoring to defeat this just and humane measure, it is evident that he is entirely in error in the attitude which he has taken and is engaged in an effort to inflict on the army, and indeed on the whole country, what would be, in the event of war, a stupendous calamity.

The present faulty condition of the medical department of the army has existed for more than five years, notwithstanding continuous efforts for its correction made by high officers of the government who have thoroughly studied the situation. Last year the Senate passed the bill and the House was in favor of it, but for some unknown reason it was blocked by the speaker. This year, in the House, the same bill is now before the Military Committee and a favorable report is anticipated.

¹ International Clinics, 1906

² Trans. Chicago Path. Soc., 1905, vi, 371

There are three vital defects in the organization of the medical corps. I. It is numerically inadequate to meet the needs of the army as it is now on a peace basis of 60,000 men. In other words, it lacks one-fourth the officers required during peace. In the event of war the army would be at once expanded to a strength of 100,000 men, when, it is obvious, the medical personnel would be entirely insufficient for the humane work required of it, and the country again would be obliged to witness the tragedy of pest-stricken camps and the ghastly spectacle of multitudes of deaths from preventable diseases. The question with any nation having world relations is not "Will war come?" but "How soon will it come?" When it does come—as come it will—we want a sanitary and medical service that will meet the needs of the time. The work of preparation must be done during peace. When the war cloud looms, it will be too late, and inadequate preparation is almost as bad as none. Inertia and delay to provide those safeguards which experience has so plainly pointed out as necessary to the efficiency of our army savor of barbarism. We have recently seen what a small nation just out of its swaddling clothes can do by enlightened action in the way of mitigating the havoc wrought by disease in war time. Are we who boast of being at the forefront of civilization to be outdone in this work of humanity by the baby of nations?

II. There is a glaring inadequacy of rank. There is less rank relatively in the medical corps to-day than in any other staff corps in the army, although the difficult and exacting duties of the department render such discrimination against it most unjust and prejudicial. To-day there are twenty-seven vacancies in the medical department, in spite of the utmost endeavors of the Surgeon-General to induce a sufficient number of candidates to take the examination. Until an appointment in the medical staff shall hold out greater inducements to the qualified young physician, it will be impossible to fill the medical corps.

III. The contract surgeon system, which Mr. Hale defends, has been an incubus on the medical department for fifty years, and is now without a single redeeming feature to justify its continuance. It has been at best but a makeshift, and under present conditions is archaic and unsatisfactory. It is true that excellent service has been rendered by many of the contract surgeons, but the system is absolutely out of place in the military service.

The bill proposed by the Surgeon-General aims to correct these defects. It is conservative, its provisions have been deeply considered and it barely meets the needs of the army. It has the hearty approval of the President, the Secretary of War, the Secretary of State, the General Staff, the press of the country in general, and the medical profession. Why has it not been passed?

It is most unfortunate that the body possessing the power to remedy the defects spoken of has in it no

specialists in any line affecting health. Perhaps for this reason it is not specially interested in the health of the army, nor is it so competent to judge of the needs of the medical department as it otherwise might be. It would seem, however, that it should be disposed to accept the earnest recommendations of those who are best informed and most capable of judging of those needs. He must, indeed, be obtuse who has not learned what these needs are, and, in the event of failure to grant the relief so earnestly sought and so palpably required, a heavy responsibility will rest on those who have shut their eyes and ears to the facts and who have opposed this beneficent legislation.

DISREPUTABLE ADVERTISERS AND THE MAILS

When all other sources fail to check disreputable medical advertisers, the U. S. postal laws frequently intervene most efficiently. A postal inspector who had already done good work in Boston was recently ordered by the Postmaster-General to go to New York to investigate a certain class of advertisers in the newspapers of that city. He found many advertisements which showed their intent clearly and that the advertisers were illegally using the United States mails, the counsel of the County Medical Society was able to furnish what amounted in some instances to legal proof of the offense against the United States laws. A large number of the more prominent of these advertisers were called to account, and it is said that many of them will be compelled to leave their present fields of activity and to seek other locations—some of them, perhaps, under pretty rigid physical restrictions. A similar campaign could successfully be carried on in every large city, and it is a pity that the United States laws will not cover a wider field and take in the accomplices who print and publish these advertisements, as well as those that actually use the mails. We can hardly pick up a newspaper published in our large cities that does not contain some advertisements whose criminal intent is easily discerned. The publishers of these papers use the mails, as well as the advertisers, and in some extreme cases have also been reached by the United States laws. Here, as elsewhere, however, a little sinning is tolerated or overlooked.

INTERRUPTION OF CIRCULATION AS A THERAPEUTIC MEASURE

There are a number of subacute or subchronic hyperplastic processes, especially involving the joints, that do not yield readily to ordinary therapeutic measures. For these Dr. William Ewart¹ has proposed a plan of treatment that, in his hands, has yielded encouraging results. The procedure has the merit of simplicity, requires no special apparatus, and has the added advantage of freedom from danger under proper conditions. The part to be treated must first be rendered anemic, the patient assumes the recumbent posture,

and the part is elevated and squeezed free of blood. An Esmarch tourniquet or a length of rubber tubing of suitable thickness is then applied. The tubing may be tightened around the member in single or in double loop over a slight protecting pad. The tube can either be drawn tight, the ends being held, or it may be coiled over itself to any degree of tightness. The constriction may be maintained for from 30 seconds to three minutes, in accordance with the nature of the conditions present in the individual case and should be released suddenly at the conclusion of the treatment, the member having previously been lowered to the dependent position. The procedure is not applicable to inflamed or tender nerve trunks, nor to senile and calcified arteries. The application of the ligature is followed by pallor of the part with emptying of the superficial veins and a subjective sensation of pressure. Later numbness appears, passing into anesthesia. Pain and tenderness lessen and may even disappear, and there may be a feeling of recovery of some degree of power for active movement. The removal of the ligature is followed after a varying interval, by a visible, bright blush of the skin and nails and a sense of increased heat. The treatment has been applied to the following conditions: Subacute, subpyrexial synovitis, persistent or relapsing in young subjects of rheumatic tendency, deforming, soft, puffy, nodular arthritis in women with chronic, quiet, intra-articular and periarthritic effusions and thickenings and the late massive arthritic thickenings with articular rigidity or with much stiffness. In view of the results reported and of the apparent harmlessness of the measure, it is entitled to fair and extensive trial. The method of treatment described is suggestive of that proposed and practiced by Bier. From this, however, it differs in the production of a primary *anesthesia* followed by a secondary arterial hyperemia. It is not improbable, on the other hand, that the good effects observed after the employment of both forms of procedure are, in reality, due to identical conditions.

THE FLY AND THE TUBERCLE BACILLUS

The recent stress which has been laid on alimentary infection in tuberculosis should lead to a more careful consideration of the means by which tubercle bacilli may reach the alimentary canal. The recent studies of Lord¹ show that the ubiquitous fly may play an important part in alimentary transmission. The bacilli not only pass the alimentary canal of the fly unchanged, but undergo a marked proliferation there. Fly specks may contain as many as 5,000 bacilli, and, according to Lord's computations, thirty infected flies may deposit within three days from 6,000,000 to 10,000,000 tubercle bacilli. The danger does not seem to be from the liberation of tubercle bacilli in the air, but from the deposition of the fly specks on food. That this can and does occur under certain circumstances was abundantly demonstrated by our experience with typhoid fever during the Spanish-American war. We should bear in mind the possibility of infection by the fly and be much more

strict than we are at present in the disposition of sputum and in the protection of food stuffs, and this refers particularly to the summer months.

WHO PAYS THE BILLS?

A rather expensive and attractive reprint of an article that appeared in a St. Louis drug journal, entitled "A Legislative Scheme of the American Medical Association, a Conspiracy to Establish a Physicians' Trust," is being widely circulated. From the number of copies that have been sent us, with the envelopes in which they were originally mailed, we should imagine that it is being circulated to every newspaper in the country, and, of course, to all medical journals. According to a correspondent in Georgia, it is also being distributed through the mails by certain congressmen under their "franking" privilege. This is certainly an interesting development! The article itself, as will readily be appreciated by those who read it and who know the actual facts, is made up of misrepresentations and specious arguments. The animus that prompted the article is, of course, evident to those who know what the *National Druggist* represents. Evidently, the object in circulating this reprint in the manner above alluded to is to create an antagonism toward the medical profession, because of its efforts in favor of the Pure Food Bill and of legislation against frauds in medicines. The question arises, "Who is paying for this?" for it is certainly costing some one considerable money, even if the free use of the mails is secured by some congressmen. Is it to be imagined that this St. Louis drug journal supplies the money? Are the individuals who are sending out their reprints attacking the Association and its work, with their "arguments" for the use of preservatives in foods, etc., paying their own printing and postage bills? Is it not extremely likely that those who are feeling the influence of the Association in its fight against nostrums have something to do with this attempt to disparage the medical profession, and especially the American Medical Association, in the eyes of the public? We have evidence that "patent medicine" men are mailing these pamphlets from Chicago, but they are also being mailed from other cities. At least one nostrum manufacturer, who has made a fortune out of our profession, is directly connected with the scheme.

Medical News

ILLINOIS

Hospital Dedicated—The Memorial Methodist Hospital, Mattoon, was formally dedicated and opened to the public, March 15.

Hospital Corps for Third Infantry—Lieut. Robert C. Bourland, assistant surgeon, Third Infantry, I. N. G., Rockford, is organizing a hospital corps for that regiment.

Hospital for Oak Park—A hospital to cost \$100,000 is to be erected at the northeast corner of Wisconsin Avenue and Monroe Street, Oak Park, for the Sisters of Misericordia.

Physicians Acquitted—Drs. Harry B. Vanatta, Lerna, and P. M. Little, Janesville, charged with manslaughter, were acquitted in the Effingham County Circuit Court, March 22.

St. Francis Hospital to Have New Building—The increasing demands on St. Francis Hospital, Evanston, have necessitated the erection of a new building which will have a frontage of 210 feet, will be five stories in height, will be equipped with all modern appliances and will cost \$100,000.

¹ Publication of the Mass Gen. Hospital, 1906, Vol. 1, p. 118.

MARCH 31, 1906

New Medical Association.—Physicians and dentists of Waukegan and North Chicago met March 12 and organized the Waukegan Medical Association, with the following officers: President, Dr Edward F Gavin, vice president, Dr Jacob F Roemer, secretary, Dr Beatrice Pearce, treasurer, Dr William S Bellows, all of Waukegan, and executive committee, Drs Leon H Tombaugh and Charles E Daniels, Waukegan, and Dr Fuller, North Chicago

Chicago

A Narrow Escape.—Firemen and policemen saved the lives of the four children of Dr William G Willard, March 17, when his house caught fire and filled with smoke, preventing the escape of the children from their rooms

Donation to Library.—Dr Nicholas Senn has presented to the Newberry Library the working library of Professor Meissner on internal medicine and a botanical library of between 200 and 300 volumes, consisting mainly of old and classic works on herbs

Buys Site for Hospital.—John P Wilson has bid in, at judicial sale for about \$80 000 practically, the entire block of ground bounded by Fullerton and Lincoln Avenues and Orchard Street. The property is to be the site of the new Maurice Porter Hospital.

Personal.—Dr Eugene S Talbot has been unanimously elected an honorary member of the Stomatological Society of Hungary.—Dr and Mrs A. F Henning have returned after nine months in Europe.—Dr Edward G Burgman was over come by gas while searching for a leak under his house, March 22, and is seriously ill.

Tuberculosis Institute Incorporated.—The Chicago Tuberculosis Institute was incorporated March 19 by Dr Arnold C Klebs, Dr Henry B Favill and Edward B Bicknell. The organization will rent a building, establish a free dispensary, collect statistics and carry on an active educational campaign. Dr Frank Billings is president of the institute, and Dr Henry B Favill, chairman of the board of trustees.

Fined and Imprisoned.—Dr N News Wood of Christian Hospital notoriety was sentenced to imprisonment for ten days in the county jail and to pay a fine of \$100 for contempt of court, March 23. The offense consisted in the violation of an injunction obtained by Dr John B Murphy in December, 1904 restraining the defendants from using his name or photograph in their literature. The Christian Hospital was also fined \$250.

Mortality for the Week.—There were 533 deaths reported during the week ended March 24, equivalent to an annual death rate of 13.55 per 1 000. This compares favorably with the death rate of the preceding week, 14.10, and with that of the corresponding week of 1905, which was 15.21. Pneumonia still heads the list with 97 deaths, consumption caused 73 deaths, heart diseases, 62, acute intestinal diseases, 32, nervous diseases, 30, nephritis, 25, and violence including suicide, 21. The death rate for pneumonia is especially low as compared with last year but there was an increase in the mortality from typhoid fever which it is hoped is only temporary, as the water supply of the city is apparently free from suspicion at present.

LOUISIANA.

Protest Against Low Fees.—At a meeting of the St James Parish Medical Society held Dec 7, 1905, the following resolutions offered by Dr B A Colomb, were adopted:

We hereby protest against the practice of certain life insurance companies in paying less than five dollars for any medical examination. We see no reason why a smaller fee should be paid for one examination than for another since the work is always the same. We can not further understand why some life insurance companies have been able to maintain a minimum examination fee of five dollars while others have not.

We have noted with surprise that, while the examination fees were being cut down on the plea of economy, all other expenses were enormously increased although the examining physician is the most important employee of any company as its success or failure will depend on the quality of his work.

We demand that the Louisiana State Medical Society take some action on this question at its next meeting and that it be brought before the American Medical Association in proper form.

MARYLAND

Hospital Incorporation.—The Emergency Hospital of Easton was incorporated March 19. A site will be procured and a building erected in the near future.

Jury Could Not Agree, Case Retried.—In the case of "Dr" J Tompkins and F William Herman a druggist of Hagerstown, charged with being responsible for the death of Miss Jean Maxwell who died as the result of a criminal operation, the jury disagreed and the defendants were released under bonds of \$10 000. The retrial was to be held March 20.

Want New Hospital.—A delegation from Somerset County appeared before the finance and ways and means committees of the legislature, March 13, asking for an appropriation of \$10,000 to build a general and marine hospital at Crisfield and \$2,500 a year for its maintenance.

Would Tax Professional Men.—Delegate Luckey of Frederick County has introduced a bill into the legislature authorizing the mayor and aldermen of Frederick to tax practitioners of law, medicine, surgery, dentistry and veterinary surgery in that city, and to impose a license tax on all lawyers, physicians, surgeons, dentists and veterinary surgeons in Frederick, and to require all such persons practicing in Frederick to procure a license.

Legislative Doings.—The bill amending the medical practice act, which was introduced into the house of delegates early in the session, was unfavorably reported by the hygienic committee, March 22. A delegation of Baltimore physicians appeared before the committee against it on that day. The amendment was designed to let in without examination all those practicing medicine up to June, 1906.—It is said the joint committee of the two houses of the legislature have prepared their report of appropriations and the same is published, from which it appears that the Johns Hopkins Hospital has been cut out entirely. The Johns Hopkins University receives \$50 000, and the University of Maryland (for University Hospital), \$60,000.—The governor has signed the bill passed by the legislature relating to vital statistics which has been mentioned in THE JOURNAL.

Baltimore

Respiratory Diseases.—Pneumonia continues to lead in the causes of mortality, 39 deaths being attributed to it last week. Other similar diseases causing mortality were Influenza, 7, bronchitis, 5, and whooping cough, 2.

Lectures.—Dr Joseph Giehner of the tuberculosis commission, lectured on tuberculosis at the Relay public school, and talks on the same subject were made at the same time by Drs. William Royal Stokes and William R. Eareckson.—Dr Hiram Woods delivered a lecture by request before the Davis Medical Society of Jefferson Medical College on "Ophthalmia Neonatorum."

Personal.—Dr Thomas Shearer will spend the summer in Europe.—Dr Eugene Lee Crutchfield, who recently was operated on at St Joseph's Hospital, is now convalescent.—Drs. John W Chambers and Thomas S. Latimer have both been ill, but are reported as improving.—Dr George Heller was thrown out of his carriage in a runaway, March 24, and badly lacerated about the head and face.—Dr John A Tompkins has been appointed resident physician at Warm Springs, Va.

MASSACHUSETTS

Communicable Diseases.—There were reported to the State Board of Health in February, 411 cases of scarlet fever, 581 cases of diphtheria, 3,018 cases of measles, 80 cases of typhoid fever, and 19 cases of cerebrospinal meningitis.

Nervous Derangements.—Dr James Jackson Putnam, professor of neurology at Harvard University Medical School, has attracted very large audiences to the series of popular lectures on "Certain Prevalent Nervous Derangements and the Outlook for Their Prevention," which he has been giving at the Lowell Institute.

Hospital for Incurable Consumptives.—In supporting an appeal for an appropriation of \$150,000 to establish a hospital for incurable consumptives, ex-Representative Googins offered to give the state a site of 53 acres in Walpole, about 20 miles from Boston. There are said to be 14,000 incurable tuberculous patients in Massachusetts.

Impure Food Convictions.—The State Board of Health continues to push adulteration investigations and secured in January, 25 convictions for the sale of impure milk, butter, lard, gluten, maple syrup, catsup, hamburger steak, lamb's tongues, sausages, malt liquors, calx chlorata, cera flava extractum, glycyrrhiza extractum, zingiberis fluidum, oleum olivae spiritus, camphore and tinctura iodi. Three hundred and thirty seven dairies were inspected in 1904 of which no fault was found.

No Medical Legislation.—There seems little likelihood of any important medical legislation by Massachusetts this year. The committees have reported against osteopathic registration, the restriction of the practice of medicine and even the definition of what shall constitute "a practitioner of medicine," asked for by the State Board of Registration. Antivivisection, however has received a quietus for another year. The petition for protection of articles of food from contamination meets with little favor.

Fined for Operating Hospital in City—Dr W M Turner, Lawton, was recently arrested for maintaining a hospital within the residence portion of the city for private gain, and fined \$25 and costs.

Personal—Dr John Threadgill, Oklahoma City, has been appointed a member of the board of regents of the territorial normal schools—Dr J K Julian, Covington, has been appointed coroner of Garfield County, vice Dr John J Barber, Hunter, resigned.

New Hospitals—Dr Joseph B Rolater has opened a new private hospital with accommodation for about 25 patients at Oklahoma City—Lawton Sanitarium has been incorporated with a capital of \$10,000 by Drs Charles S Meredith, James L Lewis, W M Turner, David A Myers, Lewis T Gooch, Edwin D Meeler and Alexander A Campbell.

Medical Societies—The Kingfisher County Medical Society at its annual meeting elected Dr Joseph A Overstreet, Kingfisher, president, Dr Charles O Gose, Hennessey, vice president and Dr Charles W Lisk, Kingfisher, secretary and treasurer—Southwestern Oklahoma Medical Society was organized in Hobart recently by physicians of Greer, Washita, Custer and Kiowa counties. The following officers were elected: Dr W I York, Hobart, president; Dr Alfred H Bungardt, Cordell, secretary; treasurer, Drs A W Holland, Hobart, and Walter I Hempstead, Arapahoe, vice presidents; and Drs T I Dodson, Mancum, W I Curley, Cordell, W W Miller, Coteba, William Tidball, Barton, Walter T Hempstead, Arapahoe, and James M Bonham, Hobart, censors.

OREGON

New Building Completed—The new building for the medical department of the Willamette University, Salem, is now practically completed and ready for occupancy.

Law Is Mandatory—The attorney general has decided that the law requiring each county to establish a county board of health and to appoint a physician as secretary of the board, is mandatory.

Non payment of Occupation Taxes—Warrants for the arrest of nearly 100 physicians and lawyers, who, it is alleged, have failed to pay the occupation tax, were issued in Portland, February 15.

Insane from Drugs—Dr Donald C Lazier, Corvallis, has been adjudged insane and committed to the Oregon State Insane Asylum, Salem. His case is one of mental aberration due to the use of opium and cocaine.

Personal—Dr Charles J Smith, Pendleton, has been elected president, Dr Edward A. Pierce, Salem, vice president, and Dr Robert C. Allen, Portland, secretary, of the State Board of Health—Dr James P Wallace, Albany, has been elected mayor of the city—Dr Eugene Du Gas, Roseburg, has been forced temporarily to suspend practice on account of ill health.

New Hospitals—New Providence Hospital, West Roseburg, is now under construction and will be completed during the year—A new Catholic hospital is to be established in Albany in the residence of a former priest at that place, to be conducted by the Sisters of Mercy—A new general hospital has been opened at Grant's Pass, with accommodations for 16 patients.

PENNSYLVANIA

Disastrous Fire—The house of Dr Lucius A Warren, Lancaster, was destroyed by fire March 13, the family narrowly escaping with their lives. The loss is total, as no insurance was carried.

Sent to the Penitentiary—"Dr" Edwin Hooper was sentenced, March 24, to 15 months in the penitentiary after two convictions for conspiracy to perform a criminal operation on a young woman of Johnstown, who died four years ago as a result of the operation.

Anniversaries—The Newcastle Medical Society celebrated its semi-centennial March 7—In honor of the twenty-fifth anniversary of his entrance into medical practice Dr John T Howell was given a banquet by his associates and the staff of the Wilkesbarre Hospital. Dr Howell was also presented with a pearl stick pin.

Personal—Dr Willoughby H Reed, Norristown, sailed for Jamaica, March 1—Dr Thomas P Cole has been elected president of the council of Greensburg—Dr Edward L Davis has been elected vice president of the Berwick board of health, and Dr Alexander B McCrea has resigned as a member of the board—Dr George M Brubaker has been appointed health officer of Mercersburg—Dr Mase S Davis, Pittsburg, returned March 7 after four months abroad—Dr John K Fair

rar, Audenreid, has gone to his home in Newburgh, N Y, to recuperate from the effects of a recent accident—Dr E Justin Butler, Wilkesbarre, was operated on for appendicitis, March 19—Dr George Hemminger has been elected president, and Dr Samuel L Diven, secretary, of the medical staff of Carlisle Hospital.

Philadelphia

Bacteriologic Laboratory Report—The report of the bacteriologic laboratory of the health bureau for February shows that 1180 diphtheria cultures were examined and that 2,951, 500 units of antitoxin were supplied.

Violation of Pure Food Laws—Three dealers were held for court, March 22, charged with violating one of the recently enacted pure food laws in not labeling grams. The defendants were held in \$500 bail for each charge against them.

Bequests—The following bequests have been approved by the Orphans' Court in the distribution of the estate of Charles Hart: Children's Seaside Home for Invalids, Sanitarium Association, Philadelphia Home for Incurables and Children's Hospital, \$5,917.45 each.

To Relieve Hospital Overflow—The finance committee of councils, on March 22, at a special meeting, appropriated \$15,000 to fit up additional quarters in the Philadelphia Museums building to relieve the overcrowded condition in the Philadelphia Hospital.

Emergency Corps Disbanded—Director Potter of the department of public safety has issued an order calling in the badges distributed among the members of the medical emergency corps organized during the previous administration, on the ground that there is no further need for the services of the corps.

Patients at Widener Home—More than 200 patients have applied for admission to the Widener Home, although only 100 can be accommodated. The first examination was made on March 22. No children will be received except those crippled by disease and those who can be benefited or cured. The age limits for admission are 4 and 10 years.

Suits to Remedy Eyesight Defects—The committee on elementary schools, together with Captain Horton of the compulsory education department, having been obliged to exclude from school a great many children on account of defects of eyesight which the parents refused to have remedied on March 21 decided to bring suit against parents who persist in their refusal.

Organizing a Northwest Branch—A number of physicians residing west of old York road and north of Hunting Parkway convened March 15 to organize the Northwest Branch of the Philadelphia County Medical Society. The requisite number of signatures was obtained to a petition for a new branch. Dr Morris J Karpeles was chosen temporary chairman, and Dr Howard D Geisler, temporary clerk.

Dixon Scores Quacks—Dr Samuel G Dixon, state health commissioner, at a meeting of the college physicians, in discussing Champe S Andrews' paper on quackery, March 19, advocated revoking the state medical license of the "quack" doctor the moment it was proved that the man was carrying on a business in such a manner as to bring disgrace on the medical profession and harm to the victim of his charlatanism. He suggested the preparation of a bill empowering the state medical board to revoke licenses in certain contingencies.

Health Report—The total number of deaths reported for the week ended March 24 numbered 586. This is a decrease of 5 from the number reported last week and an increase of 55 over the number reported in the corresponding period of last year. The principal causes of death were: Typhoid fever, 27, pertussis, 3, consumption, 60, apoplexy, 22, acute respiratory disease, 122, enteritis, 25, appendicitis, 7, Bright's disease, 56, marasmus, 4, measles, 18, diphtheria, 7, cancer, 13, heart disease, 50, suicides, 3, and accidents, 10. There were 332 cases of contagious disease, with 34 deaths, as compared with 448 cases and 48 deaths reported in the preceding week.

Personal—Dr Montgomery Biggs, chief resident physician of Philadelphia Hospital, has resigned—Drs Ralph O Clock, Thomas Mendenhall and Robert Payne resigned from the resident staff of St Agnes' Hospital, March 21—Dr Carl Vischer is ill at his home with nervous prostration—Dr John Marshall, professor of chemistry in the university, sustained a fracture of the leg in a fall, March 23—Dr Edward E Montgomery, who has been confined to his home with bronchitis pneumonia, has completely recovered—Dr Theodore Fassit and wife sailed for Genoa, March 24—Dr Walter J Cathran has been committed to the Philadelphia Hospital for the Insane.

Food Preservation by Chemicals—Dr Harvey W Wiley, head of the government chemistry bureau, made an address at the Philadelphia College of Pharmacy, March 20. He said that the use of chemicals in the preservation of foods is not only harmful, but unnecessary. "Manufacturers only use formaldehyd, etc., because this method is cheaper than sterilization or freezing. Food need not be impure, and I insist that if a manufacturer doctors his wares he should be compelled to admit the fact by the use of a proper label." Dr Wiley then showed that the accumulative effect of preserved foods was harmful.

Home Treatment of Tuberculosis—Dr Thomas H Mays, medical director of the Philadelphia Clinic for the Home Treatment of Consumption Among the Poor, announces the appointment of a staff of physicians consisting of Drs John D McLean, Ralph H Spangler, J P Bethel, Andrew D Carter and Arthur C Wolf. Daily clinics will be held between 3 and 4 every afternoon excepting Sunday, for the treatment of chest troubles in patients who are able to walk. Those who are unable to walk and are not under medical care will be visited by physicians and nurses, if necessary, on giving notice at the clinic rooms. The medical service and nurses are free, but a nominal charge for medicine is made to those who are able to pay.

SOUTH CAROLINA.

Personal—Dr Francis L Frost, health officer of Charleston, has resigned and Dr Henry W De Saussure has been appointed temporarily to the position, pending election.—Dr C Fred Williams city physician of Columbia was operated on for appendicitis at the Columbia Hospital, February 25, and is doing well.

New Hospitals—The new building of the Columbia Hospital has been completed and is in active operation.—The formal opening of Roper Hospital, Charleston, occurred February 19. The new hospital is on the site of the former city hospital and is under the charge of the South Carolina Medical Association, which agrees to care for the pauper and emergency sick and injured of the city in consideration of an annual payment of \$28,000.

Unlicensed Practitioners Convicted—The Greenville County Medical Association scored the first victory in its campaign against illegal practitioners January 29, when "Dr" C. P. Price was convicted of the unlawful practice of medicine. The prisoner is said to have fled the country. The law provides for a fine of not less than \$50 nor more than \$300, or imprisonment of not less than thirty nor more than ninety days, or both, at the discretion of the trial judge.

Examiners' Fees for Life Insurance—As the result of the recent action of the Equitable Life Insurance Company in reducing its fee for examinations from \$5 to \$3 the Kershaw County Medical Society at a called meeting in Lugoff, February 26 adopted the following resolution:

Resolved That we revert to our previous fee for life insurance examinations \$5.00 for old line companies, that pay the fee, and \$3.00 for fraternal assessment companies where the applicant pays the fee and that the secretary be requested to notify all the Societies in the state and the officers of the state medical association, requesting them to uphold us in this matter.

Tristate Medical Association of Virginia and the Carolinas—The eighth annual session of this association was held February 27 and 28 at White Stone Lithia Springs, S. C. A large attendance of the leading medical men of the three component states were present and a program of unusual attractiveness was given. The great number of excellent papers provoked so much discussion as to practically preclude the reading, save by title of fully one-half of the papers presented. It is predicted a three days' session will become a necessity another year. The following officers were elected: President, Dr Rolfe E. Hughes Laurens, S. C., vice presidents Drs Isaac M. Taylor, Morganton, N. C., Wilson E. Driver, Norfolk, Va., and James A. Harnes Blackstock, S. C., and secretary treasurer Dr J. Howell War, Waynesville, N. C. The next session will be held in Norfolk, Va., in 1907, the date to be fixed by the executive committee.

TENNESSEE

Election of Officers—At the annual meeting of the Memphis and Shelby County Medical Society, March 6, the following officers were elected: President, Dr James L. Barton, vice president Dr Cummings Harris, and secretary, Dr J. Wesley Price.

Personal—Dr John R. Rathmell Chattanooga has been appointed to succeed the late Dr Edward A. Cobleigh as a member of the state anatomical commission.—Dr William A. Shafer Chattanooga has been re-elected a member of the board of public safety.

Staff of City Hospital—The mayor of Memphis has appointed Dr James L. Andrews to the department of medicine, Dr Frank D. Smythe to the department of gynecology, Dr Max Henning to succeed Dr John M. Maury in the department of surgery, Dr Edward C. Ellett to the department of ophthalmology, and Dr Alexander Erskine to the department of obstetrics in the City Hospital.

Refuse Low Schedule of Medical Fees—At the meeting of the Memphis and Shelby County Medical Society, March 6, the following motion was adopted:

Motion—That the acceptance of the absurdly low schedule of medical fees as proposed by the Maryland Casualty Company is derogatory to the dignity of the profession and that no member of this society should accept the same; also, the proposal of such a schedule of fees by this company is an insult to the medical profession.

Patent Medicines and Counter Prescribers—The Memphis and Shelby County Medical Society, at its meeting March 20, adopted resolutions unqualifiedly condemning the action of certain druggists in assisting to defraud the public by means of guaranteeing cures by patent medicines, condemning the practice of counter prescribing by druggists, and notifying the druggists of the city that should they persist in these practices they will gain the antagonism of the members of the society.

Rutherford County Medical Society—At its meeting in Murfreesboro, March 7, the society appointed a committee on public health and legislation, consisting of Drs Enoch H. Jones, Murfreesboro, William E. Yurhee, Readyville, and Harry C. Rees, Murfreesboro. The delegate to the state medical association was instructed to vote for transactions in book form and not for a state journal. The president appointed a committee composed of Drs Enoch H. Jones, William C. Bilbro and Rufus Pitts, all of Murfreesboro, to prepare for the coming of the organizer of the American Medical Association, Dr J. N. McCormack, Bowling Green, Ky., who delivered an address at Citizens' Theater, March 13.

TEXAS

Fire Loss—Fire in Amarillo, March 11, destroyed the offices of Dr John W. Pearson, with a loss of about \$4,500, on which there was no insurance.

District Association Meeting—The Fifth District Medical Association at its meeting at Seguin, March 9, elected Dr W. A. King, San Antonio, president, Dr John T. Fitzsimons, Castroville, vice president, and Dr R. L. Knolle, Seguin, treasurer.

College Wants Railroad Hospital—Fort Worth Medical College has made a proposition to the chief surgeon of the Missouri, Kansas & Texas Railroad to add accommodation for 50 patients to the hospital department, provided the road will make use of the building as its hospital in Texas.

Must Not Advertise—At its last meeting the Tarrant County Medical Association decided henceforth to oppose all forms of advertising by physicians in daily papers, hotel registers and the like, with the exception that when a physician moves his office, he is allowed to advertise the fact for ten days, that when a newcomer locates, he may advertise for ten days, and that a practitioner who has been away from town for two weeks or more is allowed to advertise his return for the same length of time.—The Fort Worth Medical Society, at its meeting, March 7, adopted similar resolutions.

Insurance Examination Fees—The Hopkins County Medical Society, at its meeting March 12, adopted the following resolutions relating to fees for examination for accident and indemnity insurance associations:

Resolved That all fraternal or assessment insurance companies or societies shall pay not less than \$3 for each medical examination and extra for additional work or secondary examinations of urine, etc.

Resolved That all old line insurance companies shall pay a minimum fee of \$5 for each medical examination and further:

Resolved That we as members of the Hopkins County Medical Society will not report on any accident for indemnity or sick benefit for any company or society that does not regard the moral character of its risks.

Practice of Medicine Bills—The Smith County Medical Society at its meeting, March 13, approved, with modifications, the bill to regulate the practice of medicine in Texas which prescribed more stringent regulation, more strict qualifications, more rigid examinations and a compulsory examination for practitioners from outside the state. It also approved the anatomic bill proposed by the state medical association which permits medical colleges in the state to obtain bodies of paupers and unclaimed persons for anatomic material.—At a called meeting of the Galveston County Medical Society, March

DEATHS

MARCH 31, 1906

themselves to be persuaded to have it done by the cowardly, conscienceless criminals who do this kind of work. It is almost needless to say that we refer to criminal abortion. Abortion is the destruction or expulsion of the fetus or child at any stage, from the very beginning of its existence to the age of viability or the time when it can be born alive and survive, and every abortion deliberately produced, unless absolutely necessary to save the life of the mother, is criminal. Even in those desperate cases where such an operation is necessary, it should only be done after a careful investigation and consultation between two or more regularly licensed physicians.

All civilized nations brand this as a most serious, unnatural and revolting crime, and their laws provide for the punishment of the offenders. It is an outrage against God, man and Nature, and leaves a broad trail of death, suffering and moral degradation in its track. Every year thousands of mothers yield up their lives, victims to this dread Moloch and thousands more who do not die at once, drag out a miserable, invalid, childless existence, tortured by remorse and unavailing regrets for what has been done. Doubtless, in the darkness of the night, the forms of their murdered children rise up before their terrified souls, and like the guilty stain of Lady Macbeth, will not disappear, making their lives one long, dark tragedy unilluminated by hope.

We, the physicians and clergymen of Fort Collins, occupying as we do, positions of responsibility because of our peculiar relations with the people, feel that we are in duty bound to express ourselves on this subject.

E. STUVER, M.D.	C. M. HAVILAND, M.D.
I. W. FEE, M.D.	S. T. QUICK, M.D.
G. R. GILBERT, M.D.	A. W. KILLGORE, M.D.
B. F. RELLOGLE, M.D.	GEO. L. HOEL, M.D.
A. W. ROTH, M.D.	REV. J. W. SKINNER
J. J. HALLEY, M.D.	REV. GEO. P. AVERY
S. C. HALLEY, M.D.	REV. I. N. MONBOE
I. D. KERLIN, M.D.	REV. SAMUEL R. WILLSON
P. J. McHUGH, M.D.	REV. J. THOMAS CROW
W. A. KICKLAND, M.D.	REV. L. C. WOODFORD
I. F. DALE, M.D.	REV. PAUL BURKHARDT
E. I. SADLER, M.D.	

The Climate of Egypt.

CAIRO, Egypt, March 7, 1906

To the Editor.—One is much amused at hearing tourists', and especially invalids' criticisms of this climate. Of course, if one comes here with the idea that the sun shines continually, that the air is always dry and warm—neither too warm nor too cool—and that he or she can wear summer clothing during the day and evening, the idea will soon be dissipated.

There are cold days on which the temperature drops to 30° at times and there are cloudy days with sometimes rain. On the whole, however, one can not growl at this climate. I find the main trouble to be that when the air is cold the indoor life is almost intolerable because there are no heating facilities. In America the houses are always very warm. Small petroleum stoves are really sufficient to make the rooms here quite cosy on the coldest days.

During the summer the days are hot, but generally the evenings are cool. In the beginning of the summer, during the American spring, we have the (Khamseens) "fifty days," in which time the hot sand storms occur. When physicians send patients to Egypt they should advise them to go to Asswan during the months of December, January and February, and to spend the other month of November or March in Cairo—or rather Helwan. Of course this arrangement is very expensive, but to send patients here and allow them to go to upper or lower Egypt as they please is harmful to the patients as well as to Egypt's reputation.

An American rheumatic patient came out this winter and at once went to Asswan, stayed a few weeks and came back to Cairo in February, stopped at a hotel in the business part of the city and had rooms on the ground floor looking out on the well watered garden. Of course his rheumatism was benefited.

Visitors to Cairo should be prepared to find no garden of Eden but they can be much benefited by this beautiful farm

ing country with the desert its near neighbor. Fresh vegetables and fresh fruits are always obtainable. The people are picturesque and can teach us patience by their "Praise God!", "If God wills!" and "Tomorrow" expressions.

The history of the ancient Egyptians, Greeks and Romans is vividly portrayed by the temples, tombs, forts, etc., and there are also the picturesque Arabic architecture and the museums, rich with the finds of Egyptologists. I add this table of the mean maximum shade temperatures of Cairo (recorded for 18 years), Alexandria (recorded for 21 years), and Asswan (recorded for 4 years). This will show how one can find the warmth and escape the heat and coolness.

	Cairo	Alexandria	Asswan
January	66 64 F	cooler	78 70 F
February	68 71 F	cooler	80 84 F
March	72 78 F	cooler	84 91 F
April	82 86 F	cooler	92 103 F
May	88 94 F	77 81 F	hotter
June	94 98 F	81 83 F	hotter
July	97 98 F	84 80 F	hotter
August	96 98 F	87 86 F	hotter
September	92 88 F	86 84 F	hotter
October	88 84 F	83 80 F	hotter
November	80 73 F	77 73 F	hotter
December	70 67 F	70 67 F	82 78 F

This shows that the climate of Cairo is not bad in March, April, October and November. Asswan is agreeable in January, February and December, and during the summer months Alexandria is quite pleasant. Of course Alexandria is not so dry as Cairo and Asswan.

J. M. KEICHLIN, M.D.

Marriages

REBA LLOYD, M.D., and Charles E. Kump, both of Bridgeton N. J., March 22.

JAMES RUSSELL BASS, M.D., to Miss Sue Virginia Tilton, both of New Orleans, February 24.

RUSSELL B. CHACHERE, M.D., to Miss Ethel Ellen Edwards, both of Opelousas, La., March 15.

WILLIAM B. McCASKILL, M.D., Idabell, I. T., to Miss Kitty Adams of Argo, Texas, March 19.

D. F. REEDER, M.D., Paducah, Ky., to Miss Minnie Sargent of Sharp, Ky., at Cairo, Ill., March 17.

WILLIAM H. KIRK, M.D., Amory, Miss., to Miss Nellie Douglass Thomas of Memphis, Tenn., March 8.

WILLIAM TRAY BIVINGS, M.D., Atlanta, Ga., to Miss Helen Earl Randall of New York City, March 15.

TOM B. TODD, M.D., Richards, Mo., to Miss Nell Welborn of Sweet Springs, Mo., at Nevada, Mo., March 15.

LEROY R. STODDARD, M.D., New York City, to Miss Caroline E. Williams of Detroit, Mich., in New York City, March 14.

Deaths

William Turner Bacon, M.D., College of Physicians and Surgeons in the City of New York, 1871, a member of the American Medical Association, American Ophthalmological Society, Connecticut Medical Society, Hartford County Medical Society, formerly president of the Hartford Medical Society, formerly assistant in physiology in the College of Physicians and Surgeons, and curator to the Charity Hospital, New York City, ophthalmic and aural surgeon to the Hartford Hospital, consulting surgeon to St. Francis Hospital, one of the most eminent specialists in diseases of the eye and ear of New England, died at his home in Hartford, Conn., March 16 from kidney disease, after an illness of several years, aged 59.

Robert Ogden Doremus, M.D., New York University, New York City, 1851, a member of the American Medical Association, eminent as a chemist for more than 50 years, assistant to Dr. John W. Draper from 1843 to 1850, professor of chemistry and physics for many years in the College of the City of New York, a frequent contributor to the medical and scientific press, a member of the advisory commission of the department of health of New York City, since 1861 professor of chemistry in Bellerue Hospital Medical College, an expert on poisons, inventor of the system for disinfecting ships which has been in use in New York harbor for 40 years, died at his home in New York, March 22, from arteriosclerosis, after an illness of ten days, aged 81.

every practitioner should base his charges on professional ability and on the character of the demands made on it instead of on a chalk mark account of the number of office calls or visits made. He advises every physician in America to make skill and services the basis of all his charges, taking care that the amount named shall be sufficient to cover silently all visits, detentions, distances, etc. because by so doing a physician will enhance his reputation for skill and at the same time get better returns for his work.

The Dirt Menace—For years, says Dr. H. S. Anders, in *Pennsylvania Medical Journal* I have felt that in fighting the dirt evil a most important branch of sanitary work was to be found, especially in the large cities and towns. Public adaptation in this matter is hardly more than a threshold recognition. Street dust, plush cushion dust in trolleys, regular passenger and Pullman cars, damp and dirt corner and crack dust in houses, etc., is loaded with pus micrococci, and besides purulent nasopharyngeal tonsillar, sinus and bronchial inflammations may be a threefold factor in pulmonary tuberculosis. First it may act as a predisposing cause, as a direct physical irritant to the respiratory passages thus inflaming the mucous membrane and weakening their resistance to bacillary invasion, second it may carry infection directly by means of dried, frothy tubercular sputum that some ignorant or careless consumptive has recently expectorated, third it may aggravate tubercle by converting an incipient and curable case into one of rapid and virulent destruction of lung tissue because of the addition of pus producing germs. Pulverized poison added, a mixed infection engendered and speedy dissolution follows. Will our municipal authorities see clearly, understand fully, and act humanely? How long must the people submit submissively to the present conditions of street dirt, insufficient sprinkling and infantile methods of cleaning? For the fault is not entirely with rushing automobiles, grinding trolley cars, and unsophisticated Italian street sweepers. Were the dirt removed at night and the comparatively slight remaining dust kept down during the day by sprinkling as a part of a city's duty to its citizens, these public utilities would incur less justifiable criticism.

The Cold Storage of Undrawn Poultry and Game—Last year the New York legislature defeated a bill the substance of which was the prohibition of the cold storage of game or poultry in the undeveloped state and its subsequent sale to the public. We learn that the authors of last year's defeated bill are about to introduce a similar measure again this year. The defeat of such a measure is only an instance of the strength of the so called "beef trust." Not content with squeezing the last penny out of the public by their high charge for all the meat that is sold, they actually menace the health of communities by selling undrawn game and poultry which has been left in cold storage for an indefinite period. Undoubtedly a large percentage of the cases of toxin infection which have become so prevalent of late years are directly ascribable to cold storage poultry.—*Medical Age*

Source of Girault's Paper on the Bedbug—In our editorial March 17, 1906, on the bedbug and disease possibilities, we spoke of a pamphlet by A. A. Girault as a publication of the United States Department of Agriculture. The reference we gave was wrong. The paper in question appeared in *Psychic*, Vol. XII, Nos. 3 and 4, June August, 1905, pp. 61-74. This periodical is published by the Cambridge Entomological Club, which may be addressed in care of the Boston Society of Natural History, Boston.

Aselli—The cluster of lymphatic glands lying in the mesentery is sometimes called the pancreas of Aselli, or lesser pancreas. These glands were described by Gaspar Aselli, an Italian anatomist, who was born in 1581 and died in 1626. His home was at Cremona. In the year 1622, while professor of anatomy at Pavia, he discovered the lacteals, and wrote a book on the subject.

Dr. Young of Glasgow—In *THE JOURNAL*, Jan. 6, 1906, page 45, we referred editorially to the author of the article, "Gunshot Wounds of Peripheral Nerves," as Archibald Young of London. Dr. Young calls attention to the fact that his address is Glasgow, not London.

Book Notices

THE ANIMAL PARASITES OF MAN A Handbook for Students and Medical Men. By M. Braun. Third enlarged and improved edition with 204 illustrations. Translated from the German by P. Falcke, brought up to date by L. W. Sambon, M.D., and F. V. Theobald & Co. Cloth. Pp. 453. Price, \$5.00 net. New York: William Wood.

This is the first English edition of this work, which contains 453 pages. The paper strikes one as rather inferior in quality. The book contains in convenient form an enormous amount of facts and authoritative information concerning the non-bacterial human parasites now of such growing importance not only to physicians living in warm climates, but also to those in temperate and even cold regions. Parasite carriers (mosquitoes, tsetse flies, ticks, etc.) are considered fully. The book is sure of appreciation. In the next edition the author no doubt will revise the section on trypanosoma so as to bring it in better harmony with the results of recent investigations.

PHARMACOLOGY AND THERAPEUTICS By R. W. Wilcox, M.A., M.D., LL.D., Sixth Edition. Based on the Fifth Edition of White and Wilcox's "Materia Medica and Therapeutics." Cloth. Pp. 1010. Price \$7.50. Philadelphia: P. Blakiston's Son & Co., 1905.

This is a companion book to White's *Materia Medica and Therapeutics*, but it has less to commend it. On page 10 we find the following: "It is also equally true that the details of the chemical behavior of such substance can be ascertained only by performing the necessary reactions, and the point has therefore been well taken that as there is no prospect at the present time of explaining the latter from its constitution, there is still less hope that much advance will be made in the near future in formulating the laws governing the details of its pharmacological effects." To this we can not agree. Just as the chemical behavior of many substances can be stated with reasonable accuracy from a knowledge of their constitution and relationship, so much advance is being made in the study of the relation between chemical constitution and pharmacologic effect. Another criticism that may be made is that in a book intended as a text book for use in American schools and colleges there are too many preparations of the British Pharmacopoeia—to say nothing of the amount of space devoted to certain proprietary remedies, of which little is known beyond the statements of the manufacturers. On page 33, in speaking of ether, the author has used the practically obsolete term "sulphuric ether." He may be severely criticised for using obsolete or unusual terms, *sal alembroth*, for example, which tend to confuse the reader. It is to be regretted that so few books designed to be used as text books for students of medicine possess so little educational value.

SURGICAL TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE EAR AND MASTOID By S. Oppenheimer, M.D. Illustrated by 48 half-tone plates, containing 64 figures and 27 key plates, etc. Cloth. Pp. 425. Price, \$8.00. Philadelphia: P. Blakiston's Son & Co., 1906.

This is one of the most important books that has appeared on this subject in the English language. It must, of course, be compared with McEwen's classical work and with Whiting's recent publication, but it does not suffer in the comparison, as it is more generally and practically useful than either. McEwen's book is more authoritative and learned, and in reality forms a ground work or foundation for scientific mastoid surgery, and will remain a classic to which we must always turn for counsel, but it does not touch on middle-ear surgery nor on that subject which is of enormous interest to modern otologists, the radical mastoid operation. Therefore, as a practical every day working book Oppenheimer's production will be more frequently useful to the busy surgeon.

Whiting's artistic book on "The Mastoid Operation," while excellent as far as it goes, makes no mention of the radical operation and proved disappointing to those readers who expected a complete dissertation on the subject from one of Whiting's erudition, skill and experience. We, therefore, reaffirm that Oppenheimer's book, containing, as it does, the necessary anatomy of the temporal bone, the treatment and operative interference of the tympanum, a comprehensive chapter on "Anatomic and Surgical Landmarks," directions for the simple mastoid operations and its complications, minute instructions as to the radical mastoid operation, including most comprehensive descriptions concerning the vari-

ous plastic procedures, together with a wealth of beautiful and plain pictures that clarify the entire subject, will at once assume a position of first importance in the working library of the aural surgeon. The mechanical part of the volume is excellent, and the illustrations can not be too highly commended and they will be appreciated by those who are not well up on their anatomy. An interesting feature of the book is its plain and comprehensive chapters on suppurating middle-ear diseases and their treatment, surgical and otherwise, indeed, the only criticism that can be made on this section of the work is the feeling that the author has devoted a preponderating amount of space to these subjects, still, in these days of tendencies toward radical surgery of all kinds, it is gratifying to note the words of warning and a leaning toward conservatism. The author himself, however, is evidently "torn with conflicting emotions," for quite frequently throughout the book while dwelling on middle ear treatment for suppuration and going into minute details concerning ossiculectomy and curettage and emphasizing its importance at great length, he lapses into the prevailing opinion that, after all, intractable middle ear suppurations are best treated by the radical operation. In this view he will be upheld by the best and most progressive surgeons, for, while conscientious surgeons never desire to rush unnecessarily into operative procedures yet considering the mortality of unchecked tympanic suppurations and the inaccessible location in the antrum and cells of most of these diseases the radical operation is the only logical treatment in a large proportion of such cases. Nevertheless conscientious and proper middle ear treatment, followed perhaps by ossiculectomy, etc., should, of course, as recommended by Oppenheimer be given a faithful and pains taking trial before so serious an operation as a radical mastoidectomy is advised. Success however can only be expected in those cases in which the seat of disease is limited to the tympanic cavity, and not to those instances in which necrosis, granulation, etc., have extended backward to the antrum or to the cells, and, as Oppenheimer says on page 9, it should never be forgotten "that the purulent discharge should be looked on as a symptom of the pathologic conditions present and not as the actual disease itself." The author also calls attention to the fact on page 9 that "the order of the discharge can easily be relied on as an indication of necrosed bone unless it is unusually persistent, following careful local cleansing of the tympanic cavity." It may, as he says, be due to "the presence of a retained irritating secretion or of a mass of desquamated epithelium undergoing fatty transformation." On page 185 the very interesting statement is given by Birmingham that the antrum was absent in one skull among one hundred which he examined. This observation can not fail to be of interest to all who frequently perform some form of mastoid operation as many authors affirm positively that the antrum though sometimes misplaced is invariably present. Another interesting statement by Burkner is given on page 186, to the effect that he found congenital dehiscences of the tegmen antri present 167 times in 705 cases. These studies also disclosed the fact that, irrespective of age, the antrum can always be found (when present) inferior to the linea temporalis and superior and anterior to the squamo-mastoid suture.

On page 189 attention is directed to the well known close contiguity existing between the osseous Eustachian tube and the internal carotid artery, which are separated by a thin shell of bone which fact is instructive when the surgeon undertakes to curette the tube mouth in the radical operation with either the sharp spoon or bur, and argues in favor of pressing these instruments forward instead of backward toward the artery. On page 239 Oppenheimer states that the radical mastoid operation is not necessary in all cases of chronic purulent otorrhea, as necrotic and other changes in the antrum and cells are not always of sufficient extent to warrant this procedure. In this statement, of course, he will not be contradicted, the only problem to be solved being the existence and extent of the pathological changes of serious character within these chambers. This can easily be done in those cases accompanied by mastoid symptoms, such as pain, tenderness, swelling, temperature, etc., but what of those cases in which the mastoid is quiescent, and in which the only in-

dication is a persistent intractable discharge, which does not yield to suitable middle ear treatment nor even to an ossiculectomy, and in which the existence of intra mastoid disease is reasonably certain? Some light may perhaps be thrown on this perplexing question by referring to the opinions of some otologic leaders as quoted by Oppenheimer. Milligan says "When the suppuration has persisted for twelve months, with careful local treatment for three months without avail, the mastoid should be opened." Luc advises a mastoid operation "for the cure of aural suppuration after operation by way of the meatus has failed." Schwartz operates "as a prophylactic operation to facilitate drainage in incurable fetid suppuration even with no evidence of retention." McEwan advises a radical operation to prevent the danger of future complications in cases where "pyogenic lesions exist in the middle ear or its adnexa which are either not accessible or can not be eradicated through the canal." Kuster advises the radical operation in intractable otorrhea "on the general surgical principle that when a collection of pus is confined within a bony cavity the focus of infection should be freely opened in order that the morbid changes present can be seen and the pathologic tissue thoroughly eradicated." And so these opinions might be repeated and indorsed by otologic leaders throughout the world, the only question being as to when and under what circumstances an aural discharge shall be regarded as intractable, in order to announce the advent of operative mastoid advice. It is hoped that some reasonably accurate data will some day be thrown on this as yet unsettled problem, and that meanwhile the mortality reports of septic intra cranial lesions may not be allowed to become over large.

On page 254 the rather strange advice is given to commence opening the mastoid cortex over the antrum with a gouge or drill, and then to complete the work with the chisel. On the same page the statement is made that so well known a surgeon as Blake uses a long broad bladed drill with which to commence the opening in the cortex. One would suppose that in this day of advanced mastoid surgery such dangerous and inadequate weapons as drills would have been relegated to the receptacle for discarded instruments. No instrument should be used for this operation whose cutting edge cannot be kept under constant observation, as in a bony shell, where the anatomic landmarks are so shifty in their location as is the case in the mastoid bone, there is no telling what the deadly and unseen end of a drill may encounter. This surgical warning is so well understood as to make it seem quite unnecessary and yet the suggestions on page 254 appear to render its utterance quite essential. Oppenheimer himself, on the same page, remarks that "the drill and the trephine are not so safe as the chisel," if this is true (and it undoubtedly is) then the reviewer would beg to inquire why should we go backward ten or fifteen years and use them? On page 257 the advice is given to use a lead filled or compressed rawhide mallet for driving the chisels. Of course each surgeon must select his own instruments, but the reviewer would beg to suggest that a lignum vitae mallet of ample size encased in a partial overcoat of steel is superior to either a lead or a rawhide mallet. A lead mallet is too heavy if large, and too small for convenience if of the proper weight. A rawhide mallet does not strike a firm enough blow, and soon becomes soft and pulpy if boiled a few times. A large steel covered, hardwood mallet strikes a good, firm blow, and is practically indestructible.

On page 264 the author advises (in the simple mastoid operation) that the sure location of the antrum and tympanum be ascertained by passing one probe into the tympanum by way of the meatus, and another probe into the tympanum by way of the mastoid and antral cavities, and making them touch. The reviewer is of the impression that this is a questionable procedure in acute mastoid operation, as he believes it better to leave the tympanic cavity untouched in such operations for fear of injuring the ossicles, which should usually be left alone (except in the radical operation) as they are, of course, important factors in good audition, which we always expect to preserve after the simple operation.

On page 271 the author refers to the valuable qualities of the dental or electric bur in mastoid work. The reviewer believes that there can be no question of the truth of this state-

SURGERY

1 What method would you employ in the treatment of talipes in an infant? At what age would you begin? 2 Give symptoms and diagnosis of an impacted fracture of the neck of the femur, including in detail all the landmarks employed in the differential diagnosis 3 Give etiology and treatment of an ununited fracture of a long bone. 4 Name types of fistulae in ano and describe the methods of treating the same 5 Give symptoms diagnosis prognosis and treatment of fracture of the base of the skull 6 What are the more common accidents of anesthesia, and how would you combat them? 7 Name three types of sarcoma. Give the more common location of each and the general characteristics of one only 8 Give in detail the treatment of strangulated hernia. 9 Give the etiology pathology and treatment of varicose ulcers. 10 (a) Give the differential diagnosis between chancre, chancroid and herpes preputialis. (b) Give in detail the proper treatment of syphilis.

HOMEOPATHIC MATERIA MEDICA.

1 Define polychrest, potency, dilution trituration 2 Differentiate between phytolacca and kali bich in angina faucium 3 Select three remedies useful in cholera infantum. Give symptoms calling for each. 4 Give prominent symptoms of baptisia, rhus bryonia, and gelsemium in typhoid fever 5 Differentiate the heart symptoms of digitalis cactus grand., spigelia, and kalmia lat. 6 Differentiate the gastric symptoms of ipecac, antimonium tart., and arsenicum 7 Give mental symptoms of each of the following remedies Stramonium hyoscyamus ignatia, aurum, calcarea carb 8 Select three remedies useful in dysmenorrhea. Give symptoms calling for each remedy 9 Differentiate the rheumatic symptoms of rhus, bryonia, colchicum. 10-Differentiate the skin symptoms of apis, rhus and silicea.

ECLECTIC MATERIA MEDICA AND THERAPEUTICS

1 Classify the agents acting on the respiratory tract, and name three of each class. 2 Name five agents to act on the stomach, and give the properties of each agent named and the indication for its use. 3 Name three agents that influence the pancreas, liver and intestines specifying a stimulant and a relaxant for each. 4 What agents influence the character of the blood? Name at least six. 5 What remedies would you use in treating a case of spermatorrhea and nocturnal emissions? What remedies would you use in chlorosis? 6 Name the agents you would use in expelling oxyuris vermicularis to obtain their ultimate extinction 7 Give the treatment for an aggravated case of bronchitis with profuse expectoration and also for one in which there is a dry and irritable cough. 8 Give in detail the treatment of cerebrospinal meningitis 9 What means and agents would you employ in treating a case of chronic articular rheumatism? What results would you expect? 10 Give a brief synopsis of treatment of lobar pneumonia, naming all the agents you would use

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U S Army week ending March 24 1906

Hall John D. asst. surgeon general retired from active service, March 17 1906

Chamberlain W P. asst. surgeon having reported arrival at San Francisco Cal. will proceed to and take station at Jackson Barracks, La.

Little Wm L. asst. surg. relieved from duty at Jackson Barracks La. and ordered to Fort Sam Houston, Texas for duty

Carswell R. L. asst. surgeon, having reported his arrival at San Francisco Cal. will proceed to and take station at Depot of Recruits and Casuals, Fort McDowell Angel Island Cal.

Gapen, Nelson asst. surgeon, relieved from duty at Depot of Recruits and Casuals Angel Island, Cal., and ordered to Columbus Barracks, Ohio for duty

Carswell R. L. asst. surgeon, granted 30 days leave of absence. Carroll James asst. surgeon, detailed to represent the Medical Department of the Army at the annual meeting of the Louisiana State Medical Society New Orleans, La., from May 8 to 10 1906

Gandy Charles M., surgeon relieved from duty at Fort Wayne, Mich. and ordered to West Point, N Y. for duty to relieve Lieut. Colonel H O Perley deputy surgeon general

Perley H O. deputy surgeon general relieved from duty at U S Military Academy West Point, N Y., and ordered to the Philippine Islands where on arrival he will report to commanding general Philippines Division for assignment to duty

Hammond, William G. dental surgeon relieved from duty in the Philippines Division and ordered to the United States on the first transport after July 1 1906

Long Stephen M., contract surgeon left San Francisco Cal. on leave of absence for one month.

McWilliam, Clement W. contract surgeon ordered from Fort Trumbull Conn. to Fort Terry N Y. for temporary duty

Suggs Frank contract surgeon granted leave of absence for two months

Tukev William H. contract surgeon granted an extension of seven days to his leave of absence

Navy Changes

Changes in the Medical Corps, U S Navy for the week ending March 24 1906

Zalesky W J., asst. surgeon detached from the Taney and ordered to the Veic Tori

Campbell E E., asst. surgeon detached from the Newport and ordered home to wait orders

Prown F M. P. A. surgeon orders of March 5 revoked detached from the Naval Medical School Washington D C., and ordered home to wait orders

Cleave C. C., asst. surgeon detached from the Frolic and ordered to the Wilmington

Flint J. asst. surgeon ordered to the Franklin

Cohn I F. asst. surgeon ordered to the Naval Hospital Nor

Public Health and Marine-Hospital Service

List of changes of station and duties of commissioned and non commissioned officers of the Public Health and Marine Hospital Service for the seven days ending March 21, 1906

Austin, H W. surgeon, granted four months leave of absence, from March 28 1906 with permission to go beyond sea

Young, G B, P. A. surgeon directed to report to Asst. Surgeon General W J Pettus, chairman of board of examiners, April 2, 1906 at Washington, D C., to determine his fitness for promotion to grade of surgeon

Wickes H W., P. A. surgeon, leave of absence granted for two days from March 16 1906, revoked

Lavinder, C H, P. A. surgeon relieved from duty at Stapleton N Y. and directed to proceed to Detroit Mich. and assume temporary command of service during the absence of Surgeon H W. Austin

Bogges, J S. asst. surgeon, relieved from duty at Cape Charles Quarantine Station and directed to proceed to Stapleton N Y. reporting to the medical officer in command for duty and assignment to quarters

Collins Geo L. asst. surgeon relieved from duty at Reedy Island Quarantine Station and directed to proceed to Cape Charles Quarantine Station and assume command of the service

Long, H D. asst. surgeon, granted leave of absence for seven days from March 10 1906, under paragraph 191 of the regulations de Vallin Hugh asst. surgeon relieved from duty at Baltimore Md. and directed to proceed to Reedy Island Quarantine Station reporting to the medical officer in command for duty and assignment to quarters

Primrose, R S. acting asst. surgeon, granted leave of absence for 30 days from March 18, 1906

McKay, Malcolm, pharmacist, granted one day's leave of absence

BOARD CONVENED

A board of medical officers was convened to meet in Baltimore Md., March 21 1906, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board Surgeon L. L. Williams, chairman, Asst. Surgeon W H Frost recorder

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the surgeon general, Public Health and Marine-Hospital Service, during the week ended March 23, 1906

SMALLPOX—UNITED STATES

California San Francisco, March 3 10, 7 cases
Delaware Wilmington, March 10-17, 3 cases
Florida Jacksonville, March 10 17, 3 cases
Georgia Augusta, March 12 18 2 cases.
Indiana Indianapolis, March 11 18 1 case.
Louisiana New Orleans, March 10-17, 12 cases Shreveport 1 case.

Maine Biddeford, March 10 17 6 cases
Maryland Baltimore, March 10-17 5 cases
Missouri St. Louis March 10-17 3 cases, 1 death

Montana Broadwater County Feb 1 28, 2 cases, Lewis and Clark County 1 case Missoula County, 2 cases, Silver Bow County 1 case

New York Buffalo 1 case.
North Carolina Nineteen counties, Dec. 1-31 374 23 counties Jan 1-31 438 cases

Ohio Cincinnati, March 9-16 3 cases, Hamilton, Feb 10-17, 1 case.

Tennessee Knoxville March 10 17 1 case Memphis, March 3 17 5 cases.

West Virginia Wheeling March 10-17, 6 cases

Wisconsin Appleton March 10 17 2 cases, Beloit March 3 10 1 case Milwaukee, March 3 17, 3 cases

SMALLPOX—FOREIGN

Africa Capetown Jan. 27 Feb 10 7 cases
Brazil Rio de Janeiro Feb 11 18, 3 cases
Canada Grand Falls N B, March 15 18 cases Winnipeg March 8-10 1 case

Germany Bremen Feb 24-March 3 1 case
Gibraltar Feb 25-March 4 9 cases 1 death.

Great Britain Leeds March 3-10 1 case London, Feb 17 March 3, 4 cases

Greece Athens Feb 6-20, 5 deaths

India Calcutta Feb 3 10, 141 deaths Karachi Feb 11-18 33 cases 8 deaths Madras Feb 10-16 36 deaths Rangoon Feb 3 10 56 deaths.

Malta Feb 18-24 1 case
Mexico Tampam Feb 27-March 6 5 deaths

The Netherlands Rotterdam Feb 25-March 3 1 case 1 death

Russia Moscow Feb 10-24 22 cases, 5 deaths Odessa Feb 17 March 3 25 cases 3 deaths St. Petersburg, Feb 17 24 4 cases 3 deaths

Spain Barcelona Feb 10-March 1 6 deaths, Tarragona Feb 25 March 3 1 death.

Turkey Alexandretta Feb 17 24 15 cases Constantinople Feb 18 23 2 deaths Uruguay Montevideo Dec. 1 31 1 death

YELLOW FEVER

Brazil Rio de Janeiro Feb 1-18 9 cases, 3 deaths
Mexico Merida Feb 24-March 3 2 cases

CHOLERA—INSULAR.

Philippine Islands Manila, Jan 20 27 3 cases 2 deaths Provincas 348 cases, 247 deaths

CHOLERA—FOREIGN

India Calcutta Feb 3 10 S3 deaths Rangoon 3 deaths

PLAGUE—FOREIGN

Brazil Rio de Janeiro Feb 11 18 5 cases 1 death

India General Jan 27 Feb 10 13 232 cases 10 932 deaths

Calcutta, Feb 3-10 30 deaths Karachi Feb 11 18 6 cases 8 deaths Madras Feb 10-16 9 deaths Rangoon Feb 3 10 20

Proposed Amendment

Dr J R GUTHRIE, Dean of the Medical Department of the University of Iowa, suggested that at the next annual meeting of the association the constitution be amended by striking out all reference to credits that may be allowed for work done in non medical institutions, making attendance on four years of medical work in a medical college a requirement for graduation

Amendments to Constitution

By unanimous consent subsection (d) of Section 1, Article III, was amended to read as follows: Certificates from reputable instructors recognized by the State Board of Medical Examiners duly authorized by law, or by the superintendent of public instruction in states having no examining board, may be accepted in lieu of any part of this examination

Section 2 of Article III was amended to conform with the above by inserting after the words "under the authority of," the following "the Board of Examiners or"

The next meeting of the association will be held in Richmond, Va, March 18 1907

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting Held Feb 14, 1906

The President, Dr CHARLES K MILLS, in the Chair

Dr JOHN B ROBERTS exhibited a dilated Meckel's diverticulum of the ileum which had caused strangulation of the intestine and obstruction

Prognosis in Tuberculosis of the Lungs

Dr JOSEPH WALSH said that prognosis must be viewed from two points Absolute and practical cure The latter view point was especially considered Primary factors in the prognosis of tuberculosis in regard to usefulness or practical cure are the amount of involvement, duration of disease, susceptibility to the toxin as manifested by rapid pulse, high temperature, and loss of weight, the dissemination and the association of complications Secondary factors, which, however, in individual cases might become of prime importance are age sex, race, condition of life, intelligence, temperament occupation or environment, and financial resources Among the primary factors the amount of involvement is probably the least important One patient with involvement of only one or two inches at the top of the lung if other symptoms are severe might die, while another patient with practically complete involvement of a whole lung, might recover so as to lead a useful life for an indefinite number of years Marked toxic symptoms, such as rapid pulse, high temperature and either rapid or considerable loss of weight, make the prognosis unfavorable The reverse of this is likewise true Under weight counts practically the same, or even a little more than loss of weight Larvageal tuberculosis has usually been considered of bad prognostic importance for the reason that larvageal tuberculosis is a rare primary condition and usually occurs only in association with considerable lung involvement Practically the same Dr Walsh thought, might be said of intestinal tuberculosis

A previous history of tuberculosis of the cervical glands tuberculosis of the lungs associated with fistula in ano, and a previous pleurisy gives a better prognosis Complications on the part of the lungs themselves, the heart, the kidneys and the digestive tract rendered the prognosis less good

The most critical age is the time between 15 and 25 The more remote the age on either side the better the prognosis The better the environment in which the patient has been living the worse the prognosis The only remedy for the prevention or cure of tuberculosis is a regular life with sufficient rest fresh air and good nourishment If the patient has had these and the tuberculosis has developed in spite of them the susceptibility is so great that a cure is not likely On the contrary a tuberculosis may have developed on account of bad environment and little nourishment and such a patient's resistance may be good If he is put under proper conditions however it usually happens that when a cure is

effected, for pecuniary reasons it is necessary to return to the old environment and the chances of a relapse are great Consequently the worse the environment the better the prognosis, though the greater the likelihood of eventual relapse The longer the patient has had the disease, other things being equal, the better the prognosis

Roentgen Treatment of Some Non-Malignant Superficial Lesions

Dr CHARLES LESTER LEONARD said that definite indications for employing the Roentgen rays have been determined in the treatment of superficial lesions, and that a dosage that is sufficiently accurate for comparison and for efficient employment is known The most valuable treatment by this method is the post-operative, that is, in combination with early operation He included among the superficial lesions those glandular organs that lie beneath the surface and spoke of the remarkable results that had been produced in tubercular and simple adenitis and the sinuses that often follow operation

He reported four cases of goiter in which the treatment had been applied for its alterative action, and because of the analogous character of their structures to fibrous malignant disease in which beneficial results had often been seen One patient had remained cured for three years It was a case of chronic, simple goiter of twenty years' standing A second had remained cured eighteen months since treatment was stopped, with entire absence of nervous symptoms A third patient a case of exophthalmic goiter, was much improved, but discontinued treatment A fourth patient is improving under treatment

The depilatory action of the ray has been found of great value in seborrhea, favus, ringworm and hypertrichosis The stimulant action due to modification in dosage was illustrated by the beneficial action in alopecia areata Lupus illustrated the several lesions that yield rapidly to this treatment, with a remarkable restoration of the normal and without breaking down the tissues He also reported a number of severe and chronic cases of eczemas and psoriasis varying from seven to twenty years in duration that yielded to this method of treatment Another group of difficult cases amenable to this treatment are the acne Here rapid results are obtained without scarring or disfigurement Keloids, especially those that have taken on retrograde degeneration of a malignant type, are amenable to this method of treatment

Exophthalmic Goiter Treated by the Roentgen

Dr G E PFAHLER and Dr M C THRUSH reported the case of a young woman who had the nervous symptoms extending over a period of several months Then the right lobe of the thyroid gland became enlarged After the goiter had existed for two months a ray treatment was begun After twenty two treatments extending over a period of two months she appeared to be well Improvement was noticed after a month She gained 25 pounds in weight, and the pulse fell from 120 to 72 The authors have collected thirty one cases of goiter, including four of the exophthalmic type treated by this method Twenty eight showed improvement

Calomel in Eclampsia.

Dr W REYNOLDS WILSON said that irritation of the kidneys begins early in pregnancy and imposes a task on the renal epithelium which makes the balance between the production of toxin and the compensatory elimination extremely precarious The function of the liver goes hand in hand with that of the kidneys and when the toxic ingredients of the blood remain unaffected by the converting function of the liver, the burden on the kidneys becomes too great and eclampsia is the result The action of the bile as a preventive of intestinal fermentation hangs also on the efficiency of the liver function Calomel is, therefore indicated in the therapeutics of eclampsia first on account of its diuretic effect second on account of its hydragogue action which aids in elimination, and third on account of its corrective effect in the presence of intestinal fermentation Ten fifteen and twenty grains given in the convulsive stage while opportunity for medication is present seem to have the best effect Morphine, as an adjunct, is very important although it is regarded by Dr Wilson as an un-

de malis sedative in the presence of an old nephritis. Its use, however, is strongly urged on account of its action in combating the undesirable effect of calomel, as shown in salivation and undue purgation although the latter effect of calomel is never to be taken into consideration as a disadvantage.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Treatment of Cold in the Head

In cases of ordinary cold in the head the best results are obtained according to J. P. Atkinson in *British Med Jour* by the following treatment:

R Spts ætheris nitrosi
Spts ammonii acetatis 3ss 2
Aque 3i 30

M Sig To be taken at one dose and repeat in two hours, then once every four hours.

If there be a thick discharge from the nose the following is recommended as an insufflation:

R Calomel hydrochlor gr i 06
Menthol gr ii 12
Acid borici gr i 6 65

M Sig A small amount to be used as an insufflation into the nostrils two or three times a day.

[Care should be taken to prevent the unauthorized filling of this prescription.]

If the inflammation should extend to the trachea as shown by a tickling sensation in the throat when a deep breath is taken Atkinson recommends the following combination:

R Liq ammonii acetatis 3ii 8
Spts ætheris nitrosi gr ii 11
Aque 3i 2 50

M Sig To be taken at one dose and repeat every four hours.

In the treatment of cold in the head or acute rhinitis Ingals recommends daily use of the face with cold water or sponge and sponging of the face with cold water or sponge. Rubbing the feet every morning in cold water, as compressive measures, and the avoidance of sudden exposure, damp clothing and wet feet. In the beginning an attack may frequently be aborted by moderately large doses of opium, quinin or the ammonium salts. The following combination is recommended in the early stages of the disease:

R Morphine sulph gr 1/8 008
Atropine sulph gr 1/120 0005
Pulv ipecac comp gr ii 05
Quinine sulph gr ii 40

M It cap No 1 Sig One such capsule at bedtime, followed by a hot drink.

Preparations containing ammonium carbonate or ammonium chlorid combined with liquor ammonii acetatis are recommended by Ingals. He speaks of the advisability of reducing the amount of liquids to a minimum during the active course of the disease. The attack may be cut short by the administration of the spirits of camphor in 10 drop doses, administered on a lump of sugar, or potassium nitrate in 5 grain (30) doses, or spirits ætheris nitrosi in 20 minim (130) doses, or solution of ammonium acetate in 2 dram (800) doses, repeated from time to time.

Inspiration through the nose of warm vapors or sprays of mild solutions similar to the following are recommended:

R Ammonii chloridi gr ii 12
Aque 3i 30

M Sig As a spray for the nose Or
R Acid borici gr iii 50
Aqua 3i 30

M Sig To be used as a spray or wash to the nose.

Oil sprays should follow the use of these watery sprays as the oil is sedative in character.

Epilepsy

In the treatment of epilepsy in a man 57 years of age who had suffered from the disease for fifty two years, Matthew Woods, in *Med Record*, recommended that the patient be placed on a vegetable diet, with a small amount of meat taken in the middle of the day. The supper consisted of tea or coffee, with bread and butter, avoiding such articles as cabbage, veal, pork, cooked tomatoes, pastry and other foods which were liable to undergo fermentation.

The following combination was ordered to be taken before each meal and at bedtime:

R Pulv capsiei gr 1/10 006
Strich, sulph gr 1/30 002
Terri hydrocyanatis gr 1/2 03

M Ft pillula No 1 Sig One before each meal and at bedtime.

The following was also prescribed:

R Potassii bromidi 3iss 6i

M Ft chart No 11 Sig One powder to be given at 8 a m, 12 m, 1 p m and 8 p m, well diluted with water.

The quantity of water was to be increased one ounce every week until each dose was taken in 12 ounces of water. When the attacks were nocturnal the last two doses were to be combined taken at 9 o'clock in a pint of water.

Syphilis

In the treatment of syphilis F. R. Sturgis, in his "Manual of Venereal Diseases," states that the initial lesion should not be cauterized unless it be attacked by phagedena when such a proceeding is admissible. When there are no complications, however, it may do harm. Mercury should not be given internally at this stage of the disease, as the appearance of the syphilide is retarded and the diagnosis rendered doubtful until several months have passed. Consequently no harm is done by withholding this treatment until ample time has been given for their appearance.

When the patient's appearance shows the presence of the phulides, associated with mucus patches in the throat and on the tongue, alopecia, hemicrania and glandular induration, mercury is indicated, and there is no preparation, according to Sturgis, which can act as a suitable substitute. During this period of papular eruption, therefore, the following combination is recommended:

R Massæ hydrargyri gr ii 12
Terri sulph (exsiccated) gr i 06

M Ft pillula No 1 Sig From three to six such pills a day.

It is best to begin with one pill three times a day after meals, and to increase the number to two, three times a day.

The bichlorid of mercury is recommended by some authorities administered as follows:

R Hydrargyri bichloridi gr 1/50 to 1/10 0012 006
Sapoms q s

M Sig One such pill after each meal.

If necessary to check the action of the mercury on the bowels, opium in doses of gr 1/5 to 1/4 (012 015), may be added to each pill.

Mercury may be given in another form as follows:

R Hydrargyri protoiodidi gr 1/5 to 1/12 0012 03
Ext gentiane gr i 06

M Ft pillula No 1 Sig One such pill three times a day.

This author prefers blue mass and iron pill on account of its efficacy and tolerance by the system.

The mercury should be continued until all the symptoms have disappeared or toxic conditions have arisen, such as diarrhea, sponginess of the gums and salivation. The last symptom should be avoided, if possible, so that the administration of mercury will not have to be stopped. If salivation should arise all the treatment should be suspended and the following combination prescribed:

R Potassii chloratis 3i 4i
Aqua 3vi 180

M Sig To be used locally as a mouth wash, and internally in teaspoonful doses, four times a day.

The foregoing checks the sponginess of the gums, the fetor of the breath and the flow of saliva. Other preparations which perform similar service are the following:

R Tinct belladonnæ 3ii 15
Aque 3ii 60
M Sig One teaspoonful four times a day in water
Atropin may be used in preference to belladonna as follows
R Atropinæ sulph gr 1/10 1000
Alcohols 3ss 15
Aque q s ad 3ii 60

M Sig One teaspoonful three or four times a day
The potassium chlorate should be used as a mouth wash along with the internal use of the belladonna preparation
If the sponginess is excessive and dropping out of the teetn is threatened, nitric acid is recommended as follows

R Acid nitric dil 3iv 15
Aque 3ii 60

M Sig One teaspoonful four times a day in water

As soon as the secondary symptoms have disappeared and no staining of the skin is left from the eruptions, the mercury should be discontinued in order not to create too great a tolerance by the system for the drug, and also to determine whether or not other lesions are about to follow. As the later stages of the disease are reached the mixed treatment should be substituted as follows, if it is decided to give the mercury internally

R Hydrargyri protoiodidi gr ss 1 103 06
Ext gentianæ gr 1 106

M Sig In one dose once daily, before lunch And

R Potassii iodidi 3ii 8
Tinct cinchonæ comp 3ss 15
Tinct gentianæ, aa 3ii 60
Aque q s ad

M Sig One teaspoonful well diluted in water, morning and evening, before meals

The iodides may be administered in the form of a saturated solution well diluted in water, milk or Vichy water

The mercury and iodid may be combined and given in the same mixture as follows

R Hydrarg bichloridi gr 1/4 1 015 06
Or
Hydrarg bimiodidi gr 1/4 1 015 06
Potass iodidi 3ii 8
Tinct gentianæ 3i 30
Aque, aa

M Sig One teaspoonful well diluted in water twice a day, before meals

The preparations are recommended, given before meals, to promote rapid absorption unless stomach and intestinal disturbances arise. If it is preferable for any reason to give mercury other than by the mouth it may be given in the form of anunction or by means of mercurial vapor baths, or subcutaneously

In order to avoid the dirty feeling produced by the greasy substances applied to the skin Sturgis recommends that the oleate of mercury be applied to the soles of the feet in from 10 to 20 per cent strength. The patient should be directed to bathe the feet thoroughly in hot water on the night on which the first ununction is to be applied, then half a dram of the 20 per cent oleate of mercury is rubbed briskly into the sole of the right foot, and this is repeated the following night on the left foot. The same stockings, which should be of wool, are worn night and day. The administration of iodid of potassium should be kept up continuously. If this preparation can not be borne the following combination is recommended

R Tinct iodi 3ss 15
Syr auranti q s ad 3iv 120

M Sig One teaspoonful well diluted in water, three times a day before meals

The foregoing dose should be increased in the same way as the potassium iodid

The following statements are laid down by the author in considering the treatment of syphilis

1 The average case of syphilis runs its course in from eighteen to twenty four months

2 Under proper and careful treatment the graver forms of syphilis seldom occur

3 The patient should be observed occasionally for another eighteen months

Why Mercury Is Contraindicated in Tuberculosis and Other Wasting Diseases

PRESCRIBER writes for information concerning the statement in the special article on "The Pharmacopeia and the Physician," in Chapter VIII, Feb 17, 1906, page 507, to the effect that the mercurials are contraindicated in chronic conditions

A satisfactory answer to this question necessitates a brief statement of the pharmacologic action and consequent therapeutic uses of mercurial preparations. For a long time mercurials have been employed by the medical profession, and it seems that after many years of extensive use, knowledge on this subject should begin to crystallize, and it has, in a way. The crystals are not perfect and recrystallization will doubtlessly be repeated from time to time, but our knowledge concerning the action and value of mercurials in the treatment of disease is much more positive and exact than our knowledge of the great majority of medicaments prescribed daily by the most intelligent members of the profession

The therapeutic uses of mercurials apparently approved by professional experience are as follows

1 As a cathartic. We have been repeatedly told by physiologists and pharmacologists, who have experimented on animals with artificially established biliary fistulas, that mercury is not a cholagogue. Indeed, these scientific men tell us that there is not a real cholagogue in our whole list of therapeutic agents, and by this they mean that there is nothing which in safe doses at least will increase measurably the quantity of bile formed by the liver within a given time. This is probably true, and it is well that it is so, because if we possessed such an agent it would be capable of doing great harm, and it is difficult to conceive of conditions in which it would be of great service. What the practitioner means by a "cholagogue" is an agent which aids in the expulsion of bile from the gall bladder and gall ducts into the intestines, and in certain conditions the practitioner, from thousands and tens of thousands of practical observations, is convinced that he has such an agent in calomel and other mercurials. On this point the findings of the laboratory men have been contradictory to one another, or at least not uniform, but the intelligent physician knows that he frequently meets a condition which after all is best described by the term "biliousness," in which the mercurial cathartic gives him better results than anything else. In the second place, experience in this case confirmed by more scientific evidence, shows that the mercurials furnish in some conditions the best, antifermentative cathartics. Our profession has learned, by its mistakes, that the continued administration of mercurial cathartics is not free from danger, but it has with equal certainty established the fact that in single large or in broken doses calomel in properly selected cases gives better results than any other purgative

2 The specific action of the mercurial preparations in syphilis is as well established as that of quinin in malaria. The evidence on this point is overwhelmingly convincing. Mercury, in whatever form or by whatever avenue administered, combines with proteids, and the inference from its specific action in syphilis is that it has a selective effect on the virus of syphilis and the proteids of cells that have been altered by this virus. In non-syphilitic the continued administration of mercury leads to cellular degenerations and disintegrations. This is shown conclusively by the characteristic calcareous deposits in the kidneys in chronic mercurial poisoning. So frequently has this condition been observed and so carefully has it been studied that a diagnosis of mercurial poisoning may be made from this finding alone. It is pathognomonic

It follows from what has been said that mercurials in other chronic diseases than syphilis are cell poisons. In tuberculosis and other wasting non-syphilitic diseases the chief object in the adoption of any therapeutic measures is to feed the cells of the body and not to destroy them. It follows, therefore, that in these diseases mercurials, at least their continued or frequent administration, is contraindicated

In cases of coexistent syphilis and tuberculosis, mercurials are not contraindicated. In cases of this kind the regular syphilitic treatment should be carried out. It will have a good

effect on the patient by relieving the cells from the necessity of contending with the syphilitic virus and will thus indirectly and for the time improve the tuberculous condition. Even tuberculous syphilites as well as the non-tuberculous, often gain markedly in flesh under mercurials.

Medicolegal

When Physician Can Not Testify as to Services

The Supreme Court of Alabama says in *Duggar vs. Pitts*, an action brought by the latter party against an executor to recover for professional services as a physician where a rehearing was denied that section 1794 of the Alabama Code of 1896 was intended to remove the ban of incompetency placed by the common law against parties of interest as witnesses "except that no person having a pecuniary interest in the result of the suit or proceeding shall be allowed to testify against the party to whom his interest is opposed as to any transaction with or statement by the deceased person whose estate is involved in the result or proceeding." Can it be doubted for a moment that the testimony of the plaintiff as to the number of visits he made to the deceased and what he did to relieve him did not tend to fasten a liability on the estate of the deceased and to diminish the same, in view of the fact that the testimony of other witnesses as to the value of the plaintiff's services was hypothesized on the number of visits and character of the treatment? The court thinks not. It cites in support of its position the decision of the Texas Court of Civil Appeals under a similar statute, in the case of *Garwood vs. Schluchman*, 25 Tex. Civ. App. 176, and the decision of the Supreme Court of New York in the case of *Ross vs. Ross*, 6 Hun, 182, which it says has been approvingly cited several times by said court. Nor does the court consider that the admission of the plaintiff's testimony was error without injury although there was much other evidence tending to establish his claim and showing that he had treated the decedent faithfully and skillfully for a number of months. It says that, as above intimated, his was the only evidence fixing the number of visits and while the evidence of other witnesses as to the value of services was partially based on facts independent of the plaintiff's testimony, yet the number of visits were considered in estimating the value of the plaintiff's services, which was not known to the witness whose evidence was partially hypothesized on the number of visits testified to by the plaintiff. And so it holds that the trial court erred in not sustaining the defendant's objections to questions to the plaintiff as to visits to the decedent, what he did for him, and how he relieved his suffering. It also holds that there was a failure to establish a predicate for the evidence of certain physicians as to the value of medical services in Selma, as each of them admitted that he did not know the customary charges in Selma and Dallas County.

Liability for Injury to Sick and Lame from Sidewalks

The Supreme Court of Washington holds that in *Short vs. City of Spokane*, an action brought to recover damages for personal injuries on account of an alleged defective condition of a sidewalk, the following instruction should have been given the jury. The duty of caring and of abstaining from the unlawful injury of another applies to the sick, the weak, the infirm, as fully as to the strong and healthy, and when the duty is violated the measure of damages is for the injury done, even though injury might not have resulted but for the peculiar physical condition of the person injured, or may have been augmented thereby. The proximate cause of an injury is the efficient cause. The public streets and sidewalks in a city are not constructed and maintained for the sole use of the healthy and robust people, but for the use of the infirm, the sick and decrepit as well. They may be lawfully traveled by every citizen, without regard to age, sex or physical condition. If the city negligently permit the streets and sidewalks to remain out of repair, and any person (who is himself free from negligence) is injured, the city is liable for the injury. The city is chargeable with the knowledge that people

of different bodily conditions travel its streets, and that among these are the weak, the decrepit and those with organic predisposition to disease. The city is chargeable with knowledge that all classes of persons, including both the healthy, and diseased, and lame, constantly travel its streets and sidewalks and that such disease or lameness might greatly aggravate a bodily injury. Hence the city has reasonable ground to expect that if one of that class, who are diseased or lame, is injured by reason of a defect in the sidewalk or street, the disease or lameness might develop and retard or prevent a cure.

Giving "Light Treatments," Etc., Practice of Medicine.

The Supreme Court of Tennessee says that the facts presented on the trial of the case of *O'Neil vs. State* were practically undisputed and embraced the following salient points. The first named party, who was the defendant in the court, below charged with practicing medicine without a license, opened up an office with all the arrangements necessary for the treatment of his patients. According to the testimony, he would first subject his patients to a careful examination, including a microscopic test of a drop of blood taken from some part of the patient's body. He would then determine, from his diagnosis, the nature of the patient's ailment and whether or not it would require his treatment. It was shown in the record that the method of treatment was practically uniform in all cases. "The patient is denuded of clothing and placed in a closed cabinet and his body is then subjected to the rays of two large electric arc lights, one being located in front of his body and one at the back. This treatment is continued for about thirty minutes at each sitting, and then the patient, who is by this time in a profuse perspiration, is taken into another room and rubbed off, after which he goes about his business. In addition to this general treatment a local application of the rays to the parts specially affected is made in some cases." In addition to prescribing the light treatment as the means of treatment for his patients, he gave medicines of various kinds, kept an account at a drug store where medicines were purchased, gave prescriptions in the form of orders on a certain store, advised several of his patients to take certain patent medicines as an auxiliary to his treatment, and was addressed and known as Dr. O'Neil. The record showed further that he was accustomed to make a uniform charge of \$100 in each case, for the application of the light treatment but made no charge for medicines prescribed, hence he claimed that prescriptions were no part of his treatment.

The principal contentions of the defendant were: 1 That his professional business was not within the purview of the statute regulating the practice of medicine and surgery, for the reason that he was an optician within one of the two recognized definitions of that term, and was, therefore, expressly excepted from the operation of the statute. 2 Conceding that his business was comprehended by the statute, as applied to him, said statute was unconstitutional for two reasons. First, His method of practice was not such as it was within the power of the legislature to regulate, restrict or prohibit, second, the regulation and requirements of the act, as applied to his methods of practice, were arbitrary and unjust, because his business did not require the qualifications prescribed by the statute for those undertaking to practice medicine and surgery. But the Supreme Court is of the opinion that he was properly convicted of practicing medicine and surgery without having first procured a certificate of license from the State Board of Medical Examiners, as required by the act of 1901. It suggests that the definition of "optician" ordinarily understood should be given that word in the statute. Moreover, as the proof showed that the defendant made a microscopic examination of the blood in his diagnosis of disease, and also wrote prescriptions and prescribed remedies, although it must be admitted that his principal mode of treatment was by what he denominated the "functional ray," he could not claim exemption as an optician even under the very technical definition of the word which he invoked. But the determinative fact against him on the record was that he was holding himself out to the world as a practitioner of the healing arts and was soliciting patients afflicted with disease for treatment.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Medicine, Philadelphia

March 17

- 1 *Without Mosquitoes There Can Be No Yellow Fever J Carroll Washington D C
- 2 *Gonorrhea in Women. P Findley Omaha Neb
- 3 *Foreign Bodies in the Bronchi T A Claytor, Washington D C
- 4 *Actinomycosis Limited to the Urinary Tract. E MacD Stanton Chicago
- 5 Pyrexia with the Report of Case in Which Autopsy Revealed Toxemia Rather than Pyrexia. D C Peyton Jeffersonville Ind
- 6 Hand Disinfection C P Obendorf New York

1 No Yellow Fever Without Mosquitoes—Carroll argues that the logical conclusion from the investigations which have been made would seem to be that the parasite of yellow fever belongs to the animal kingdom for the following reasons: 1 It is absolutely necessary for its continued existence that it pass alternately through man and the mosquito, and its parasitic existence in these hosts is obligatory. 2 The fact that a period of about two weeks must elapse before the contaminated mosquito is capable of infecting, points to a definite cycle of development in that insect. 3 The limitation of its development cycle to mosquitoes of a single genus and to a single vertebrate conforms to a natural zoologic law and does not agree with our present knowledge of the life history of bacteria. 4 The effects of climate and temperature on the stegomyia and on the rate of development of the yellow fever parasite within the body of the insect are exactly the same as the effects of the same conditions on the anopheles mosquito and the malarial parasite.

2 Gonorrhea in Women.—Findley says that the anatomic recognition of gonorrhea of the urogenital tract may be impossible particularly in cases of long standing. For this reason the diagnosis must occasionally rest on the finding of an inflammatory lesion in one or more portions of the tract, and associating these lesions with a history of exposure to gonorrheal infection. A diagnosis that admits of no doubt can only be based on the finding of the gonococcus in the secretions or tissues. The small size of gonococci and their scarcity in the tissues in chronic cases may necessitate the microscopic examination of a large number of sections. Since the cure of gonorrhea is so unsatisfactory, and when deeply seated is usually only accomplished by a mutilating operation which too often unsexes the woman, prophylaxis becomes the paramount issue in the management of gonorrhea in women. Unfortunately, it is not alone the lack which is in need of education in this respect the profession is often guilty of being too hasty in pronouncing a cure and in giving sanction to marriage or to the resumption of the marital relation. Untimely interference with uterine and urethral applications in the early stage of the disease too often causes an extension of the infection and makes a serious lesion of what might otherwise have been a self-limiting disease.

3 Foreign Bodies in Bronchi.—Claytor tabulates 50 cases not heretofore brought together. Among these 38 patients recovered and 12 died a death rate of 24 per cent. Of 33 patients operated on 28 recovered and 5 died, while of 17 not operated on 10 recovered and 7 died.

4 Actinomycosis Limited to Urinary Tract.—Stanton records a case which was clinically one of cystitis and pyelonephritis, the actinomycotic character of the kidney lesions not being recognized during life or at the time of autopsy, but being discovered only on histologic examination of the kidney and bladder.

Medical Record, New York.

March 17

- 7 The Border Line in Medicine and Surgery E G Janeway New York
- 8 Fever in Tertiary Syphilis D N Carpenter I S N
- 9 Moral Liberal Diet in Typhoid Fever F A Claytor Washington D C

- 10 Curability of Tuberculosis. H P Langhorst Elmhuist Ill
- 11 Conservative Treatment of Urethral Stricture G M Muren, Brooklyn N Y
- 12 Schwartz-Stacke Operation in Chronic Suppurative Otitis Media J J Thomson, New York
- 13 Displacement of the Fallopian Tubes to Produce Sterility A E Rockey Portland Ore.
- 14 Biographical Sketch of Michaelis the Pioneer Worker on Nerve-Regeneration L P Clark, New York

8 Fever in Tertiary Syphilis—Carpenter calls attention to the difficulty in the diagnosis of fever in tertiary syphilis. He illustrates this point by giving the histories of two cases recently observed, which show the necessity of administering mercury with caution. Both the patients whose histories are reported improved more rapidly when potassium iodid was used alone.

9 Diet in Typhoid—Claytor's treatment of a case of typhoid fever, no matter on what day of the disease it may come under his care, is as follows: The regulation six ounces of milk are given every two hours, night and day, while the patient is awake. In place of milk, in order to vary the monotony for those who can take milk, and as a substitute for those who can not, animal broths are given. After the subsidence of the more acute symptoms the patient is asked if he is hungry, and if he applies in the affirmative a soft-boiled or poached egg is allowed, and if well borne the number is gradually increased to three or more a day. Jelly or blanc-mange, custard, soft toast, the soft part of baked apple, and rice which has been boiled four hours, are the next additions. After this scraped beef or chop, very finely divided chicken, and baked potato are tried. Claytor does not advocate so full a diet in every case, for each patient must be carefully studied as an individual. He believes that most of the foods mentioned are quite as digestible, far more palatable, and rather less likely to cause perforation or hemorrhage by their local action, or gas production, than milk.

10 Curability of Tuberculosis—Langhorst considers that the keynote of success is an early diagnosis, tonics and rest. Proper therapeutic and hygienic modalities directed against the disease will so reinforce Nature as to make the conquest an easy one.

11 Treatment of Urethral Stricture—Muren advocates the treatment of stricture by gradual dilatation. In men beyond middle age the anterior urethra should be thoroughly flushed before any instrumentation. The best lubricant for urethral instruments is made from Irish moss, and contains a small percentage of formalin. Muren has been more successful in filing the urethra with a number of straight instruments, successively attempting the passage of each, than in the use of instruments with variously twisted ends. He instructs his stricture patients with healthy bladders to hold the urine for a couple of hours before treatment. Voided immediately after dilatation it irrigates the urethra without discomfort.

13 Displacement of the Fallopian Tubes to Produce Sterility—Rockey mentions instances in which he considers an abortion justifiable as a necessity in saving life, and others in which the possible occurrence of pregnancy would expose the patient to danger which it is most desirable to avoid. His technic is as follows: When the cornu of the uterus is brought into the field of incision, the tube is seized near its uterine end with a pair of forceps. The sharp point of a pair of scissors is thrust into the cornu, and the uterine end of the tube is cut out by a V-shaped incision with two cuts of the scissors. The wedge-shaped point of the excised end of the tube is caught with the forceps, drawn out a little between the partly closed blades of the scissors and cut off. The severed end of the tube will then slip into the peritoneal sheath and be completely covered by it. One catgut stitch is passed through this cuff, then through the fundus posterior to the inner end of the V-shaped incision from behind, forward, and tied, thus fastening the closed ends of the tube back of its original position. Two more stitches are passed around the tube and through the cornu to close the V, to control the bleeding, and to fasten the tube to the outside of the closed cornu.

tions), the blood vessels when they are isolated from their surrounding connective tissue, the thyroid gland, liver, spleen, pancreas, parenchyma of the kidneys, the female internal genital organs and the serosa enclosed parts of the testicles. It has hitherto been generally assumed that these internal organs possess little if any sensibility in health, but that they become highly sensitive in case of acute inflammation. Lennander, however, is convinced that the observations here related and his former experiences have shown that this assumption is incorrect. He thinks it is a wise economy that these internal organs are not burdened with sensibility, while their envelopes are extremely sensitive and are thus able to give warning of impending danger and the possibility of warding it off. In various influences affecting these internal organs from within could not be thrown off directly, and consequently it would be of no use for them to be subject to sensations of pain, pressure, heat and cold. None of the organs innervated by the sympathetic nerve below the branching of the recurrent nerve possesses any sensibility for pain, pressure, heat or cold. The consequence is that general anesthesia is not required for operations on tissues which are incapable of any sensation of pain. Among the numerous instructive examples cited is one which shows the complete lack of sensibility on the part of the gray and white substance of the brain to the thermocautery, to faradization and to various operative measures. The incision in the dura mater was not felt as pain. Another patient had no sensation of pain when the actual cautery was drawn along the side wall of the vagina. In the amputation of the leg of a medical student the incision under cocaine-adrenalin anesthesia was painless down to the layers of the fascia, when a few whiffs of ether were given. The operation was concluded without general anesthesia as the bone substance and bone marrow were free from sensibility, and the local anesthesia of the soft parts from the injection of the cocaine lasted until the operation was completed. No constriction was applied to the limb above. The Griggs amputation in this case was done on account of paralysis and atrophy resulting from poliomyelitis in infancy. The particulars of this expert observation are instructive. In conclusion Lennander comments on the fact that so long as a lesion developing in the spine does not encroach on the periosteum, it must develop without causing any local symptoms. When pain can be induced at the spot by pressing on the spinous process or on the head, this is a sign that the bone has been destroyed so that there is abnormal traction on ligaments and periosteum. Before this sign can be discovered evidence of the presence of the lesion might be elicited by bending and stretching the trunk and thus exerting traction which will be experienced as pain when the periosteum and ligaments have begun to be affected by toxins although the process is not yet far enough advanced for pressure alone to elicit pain.

49 Traumatic Aphasia.—In the case described a circumscribed injury of the skull was followed by complete aphasia. Speech was gradually regained as the lesion healed. The report is illustrated and adds several points to our knowledge of traumatic disturbances of the speech center.

51 Liver Abscess.—Goebels' article is a study of tropical liver abscess based on 23 cases observed in Egypt. He declares that exploratory puncture is indispensable. In operating he prefers local anesthesia. The lesion should be opened up wide and for this purpose he advises resection of about 6 cm. of one or two ribs. He cites some instances from his experience to show the disadvantages and danger of too small incisions and inadequate intervention. The dressings should be changed often and the cavity rinsed with salt or boric acid solution. The liver has a tendency to slide upward when its size is reduced. For this reason it is wise to resect a rib above the lesion. In some cases he had to make a secondary resection of a rib above on this account. He sometimes wipes out the walls of the cavity with 10 per cent. solution of silver nitrate. Only 2 of the 23 patients on whom he operated were women. He could not detect that rice, malaria or enterica had any influence on the occurrence of suppuration in the liver. The abscesses perforated into the lungs or bronchi in a number of cases requiring plastic operations and the abscesses were frequently multiple. Chloroform should be

avoided on account of the accompanying tendency to fatty degeneration of the liver.

52 Discussion of the Epidemic Nature of Appendicitis.—Rostowzew analyzes a bibliography of 117 references and extensive personal experience to prove that appendicitis is not an epidemic affection and that no connection between it and epidemics of influenza is discoverable.

54 Tumors Encroaching on Spinal Cord.—Oppenheim gives an illustration of five tumors developing on the inner aspect of the spinal dura which he successfully removed in the five cases. The tumors are all of about the same size, round or ovoid in shape. All were diagnosed during life and the exact location determined, with one exception, in which it was located too high. The specimen from a sixth similar case is not included in the illustration. One of the patients has been cured for nearly four years, another for several months to date, another was relieved of all symptoms for a number of months, but the other patients succumbed in a few days or weeks after the operation. If infection could have been prevented, 2 of the latter would probably have been cured like the first patient. He is convinced that the chances of operative treatment are much better for tumors of the spinal membranes than for brain tumors, but the indications must be carefully observed. In a recent case he advised against operating as the diagnosis of the exact location of the tumor was uncertain. Another surgeon performed the operation, which gave no results and was fatal. The details of 8 cases are given. In one the symptoms had been those of a growth encroaching on the spinal cord in the lower dorsal region. It was an extravertebral, malignant neoplasm developing from the seventh rib. It had destroyed the vertebrae and made its way into the spinal canal. The preceding stage of neuralgia was probably due to compression of the intercostal nerves. Roentgen examination during the neuralgic stage would have revealed the extravertebral growth, but the patient was not seen until this stage had passed, and the symptomatology later was then merely that of the ordinary benign, intradural tumor. It has been his experience in several instances that these malignant tumors originating in the vicinity of the spine first make their presence manifest when they begin to encroach on the spinal roots and cord. The results of partial removal of the tumor were surprisingly good. The previously decrepit paralyzed man was able to walk without a cane and to visit his place of business, this improvement persisted for four months. In a second, similar case, the growth was totally removed and the patient is still in good health, eight years afterward. This patient was a woman of 27 who had noticed for four years a lump in her neck apparently originating in the fourth or fifth cervical vertebra, and becoming increasingly painful. During the last year there was paresis of the arm and leg on that side and numbness in the other leg. The muscles in the region of the cervical plexus were atrophied, and the response to electric tests was abnormal. The tumor proved to be a spindle-shaped enlargement of a nerve root, and it extended into the spinal canal. As the tumor was seen to be a sarcoma the surgeon (Bardeleben) regarded it as inoperable, and dismissed the patient. A surgeon in her home town later removed the growth, permanently curing all the pains and tendency to paralysis, although a briefly transient mental disturbance followed the radical operation. Oppenheim urges those who have published cases of successful removal of malignant tumors of this kind to report on the ultimate outcome. The differential points in the symptomatology of Oppenheim's various cases are reviewed and discussed in detail.

56 Appendicitis Larvata.—Korach applies this term to a form of chronic appendicitis which belongs in the category of chronically recurring rather than that of chronic residual appendicitis. He reports 5 cases and describes masked appendicitis as a combination of two factors, namely, a chronic affection of the appendix and a neurosis affecting the viscera. The neurosis usually is the result of hysteria or hysteroneurosthenia. Treatment which cures one of the factors alone but allows the other to persist, is inevitably ineffectual or is liable to aggravate the persisting factor. He classes this form of appendicitis in the group of the hard-to-cure myxoneuroses, which includes bronchial asthma and mucous colitis.

are all in favor of prompt surgical intervention. It is the only means, he thinks, of locating the cause of the hemorrhage and of checking it. Wide opening up of the chest is not such a dangerous procedure he is convinced, as is generally assumed. It should be done with greater confidence and not merely as a last resort. It is an easy matter to suture a stab wound of the lung, and this effectually arrests the hemorrhage.

136 Fixation of Kidney—Biondi has had occasion to perform nephropexy in 15 cases, and early became convinced that the various techniques proposed to date have each some serious disadvantage. He devised a method which he has successfully applied in a number of cases and commends as being entirely harmless, fastening the kidney securely and permanently, while not injuring the renal tissue. He removes the fatty and fibrous capsule of the kidney, and then holds the organ in its place by packing with a long strip of gauze. The gauze is packed to fill all the space in front of and below the kidney. He first passes a strip of gauze around the lower pole of the kidney, an assistant pulling on the ends of this strip of gauze raises and holds the kidney in place. He then sutures the end of the long strip of gauze to the center of this first loop of gauze, and the rest of the long strip is packed in place, filling the space in front of the kidney with zigzag folds and then the space below the lower pole, bringing the end of the strip out through the lower angle of the incision. The two ends of the first loop of gauze are brought out through the upper angle of the incision. The most energetic tamponing never produced any disturbance in the kidney or adjacent organs. After eight or ten days he commences to withdraw the gauze, a little at a time, and the kidney is invariably found firmly fastened in its place. No disturbance with function has ever been noted, not even in two women who were treated by this technique, both kidneys being thus fastened in place in a single sitting. The results were equally good in the case of a male patient whose left kidney had been fastened in place in this way. One month later the right kidney had to be removed, six months after nephrotomy had been done on this kidney for calculi. In numerous experiments on dogs he found the results equally satisfactory when one kidney was removed and the other packed in place in this way with the tampon. The new formation of connective tissue was not very extensive, it did not invade the tissue of the gland, and caused neither atrophic nor functional disturbances. The adhesions holding the kidney in place were evident by the fourth day and reached their maximum by the twentieth day. After this the adhesions loosened up a little which allowed the kidney its physiologic excursions with the movements of the diaphragm, is in normal conditions.

137 Experimental Study of Rabies—Fermi remarks that the rabbit, guinea pig, dog and cat are almost totally insensible to hypodermic injection of fixed rabies virus, but that rats are especially susceptible. He describes numerous experiments undertaken to solve various problems of treatment of hydrophobia. In his attempts to produce a Pasteur vaccine that will keep indefinitely he found that a number of mercury and silver salts were able to keep the emulsion sterile in his tests, as also 1 per cent. carbolic acid and 1 per cent. malachite green.

140 Effect on Heart and Kidneys of Bandaging the Legs—Plessi has been making a number of tests of healthy persons and of those with other than vascular affections to determine the effect of blood expelling bandaging of the legs. The subjects were kept in bed twenty-four hours and the pulse, blood pressure and urinary findings recorded. Then later they stayed in bed for another twenty-four hours or longer after a bandage had been wound around each leg from the sole to the groin. Comparison of the findings showed a remarkable effect on the kidney functioning. The amount of urine increased from 50 to 100 per cent or more. The specific gravity of the urine, the pulse and the blood pressure did not show any appreciable difference although the elimination of chlorids was increased. The bandages were tolerated without any disturbance by healthy subjects, but they had to be removed in six and seven hours in the case of one patient with mitral stenosis and of another with polyserositis on account of the development of precordial oppression and palpitation. Even in the

space of time the diuresis was considerably augmented in each case. This effect is probably the result of the active hyperemia in the kidneys.

143 Antidiphtheria Serum in Erysipelas—Mistri reports from Rome 3 cases of erysipelas, which seemed to be cut short or very favorably influenced by two injections of antidiphtheria serum. He injected 500 units in children and 1,000 in a man of 60 and a woman of 35, repeating the injections twice in the course of one or two days.

147 Gastropexy—Laffranchi has coined this term from the Greek to apply to an operation by which the stomach is made smaller by a series of threads passed nearly parallel through its outer coat from the upper to the lower margin of the organ on the anterior aspect. Drawing up the threads makes the organ smaller. Instead of "taking up a tuck" by the usual technique for such operations, the organ is "shirred." This technique interferes less with the tonicity and peristalsis of the stomach, while it leaves the pylorus intact. The outcome was extremely satisfactory in the case of a man of 31 whose chronically dilated stomach extended four fingerbreadths below the umbilicus.

150 Preventive and Curative Use of Antitetanus Serum—Pergola relates experiences with 30 patients who were given prophylactic injections of antitetanus serum, and also with 2 patients already presenting evidences of tetanus. He states that the action of the serum is especially pronounced when the disease runs a protracted course. He found that the prognosis was more favorable the longer the period of incubation. The intracerebral or intravenous use of the serum did not appear to have any advantages over the subcutaneous route. In conclusion he adds that between 1887 and 1902 an average of 750 persons died annually of tetanus in Italy. In the last few years it has become much less frequent, and in his annual material of about 1,800 patients he has not encountered a case except the two mentioned above with tetanus already under way when first seen.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

SELF PROPELLED VEHICLES A Practical Treatise on the Theory, Construction, Operation, Care and Management of all Forms of Automobiles. By J. E. Homans A.M. with Upward of 500 Illustrations and Diagrams Giving the Essential Details of Construction and Many Important Points on the Successful Operation of the Various Types of Motor Carriages Driven by Steam, Gasoline and Electricity. Cloth. Pp. 652. Price, \$2.00. New York: The Auel & Co. 1905-1906.

CASE TEACHING IN MEDICINE A Series of Graduated Exercises in the Differential Diagnosis, Prognosis and Treatment of Actual Cases of Disease. By R. C. Cabot A.M., M.D. Instructor in Medicine in the Harvard Medical School and Physician to Outpatients at the Massachusetts General Hospital. Cloth. Pp. 214. Price \$1.50. Boston: D. C. Heath & Co. 1906.

RECENT ADVANCES IN PHYSIOLOGY AND BIO-CHEMISTRY Edited by Leonard Hill M.B. F.R.S. Contributors: B. Moore M.A. D.Sc., T. J. R. Macleod M.B. L.Hill M.B. F.R.S. M. S. Pembrey M.A., M.D., and A. P. Reddard M.A. M.D. with Diagrams. Cloth. Pp. 740. Price \$5.00 net. New York: Longmans, Green & Co. 1906.

PROFESSIONAL EDUCATION, with Special Reference to Medicine. An Address Delivered at King's College London on Oct. 3, 1905. By T. C. Allbutt, M.A. M.D., F.R.S. Regius Professor of Physics in the University of Cambridge. Cloth. Pp. 80. Price, 75 cents. New York: The MacMillan Co. 1906.

PHARMACOLOGY AND THERAPEUTICS By R. W. Wilcox M.A. M.D., LL.D. Sixth Edition. Based on the Fifth Edition of White and Wilcox's "Materia Medica and Therapeutics." Cloth. Pp. 1010. Price \$3.50. Philadelphia: P. Blakiston's Son & Co. 1905.

CHEMISTRY OF THE PROTEIDS By G. Mann M.D. B.Sc., University Demonstrator of Physiology, Oxford. Based on Prof. Otto Cohnheim's "Chemie der Eiweisskörper." Cloth. Pp. 606. Price \$3.25. New York: The MacMillan Co. 1906.

DIE NIERENFUNKTION Ihre Ursachen und Bekämpfung. Eine verständliche Darstellung von Dr. H. Enckel Kurarzt in Reichen (Aegypten). Mit einer Abbildung im Text. Paper. Pp. 80. Munich: Verlag der Aerztlichen Rundschau. 1906.

RADIUM UND RADIOAKTIVITAET von Dr. med. Ernst Sommer Spezialarzt für physikalische Therapie, Winterthur (Schweiz). Mit einer Abbildung im Text. Paper. Pp. 52. Munich: Verlag der Aerztlichen Rundschau. 1906.

THE FIFTH ANNUAL REPORT OF THE TRUSTEES OF ST. LUKE'S HOSPITAL for the Year Ending Dec. 31, 1905. Spokane: Paper.

